

## SAFETY DATA SHEET

A08530

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of	f the substance/mixture and of the company/undertaking
1.1. Product identifier	
Product name	A08530
Product number	A08530, FP-000833, FP-000837, FP-000841, FP-001721, FP-001852, FP-002594
1.2. Relevant identified uses	s of the substance or mixture and uses advised against
Identified uses	Adhesive.
Uses advised against	No specific uses advised against are identified.
1.3. Details of the supplier o	f the safety data sheet
Supplier	APOLLO CHEMICALS LTD
	SANDY WAY
	AMINGTON INDUSTRIAL ESTATE
	TAMWORTH
	STAFFS
	B77 4DS
	T: +44 (0) 1827 54281
	F: +44 (0) 1827 53030 E: compliance@apollo.co.uk
	E. compliance@apolio.co.uk
1.4. Emergency telephone n	number
Emergency telephone	+44 01827 69662 (NOT 24HRS - 8am-5pm mon-fri )
SECTION 2: Hazards identit	fication
2.1. Classification of the sub	stance or mixture
Classification (EC 1272/200	8)
Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H336
Environmental hazards	Not Classified
Human health	Product has a defatting effect on skin.
Physicochemical	Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers.
2.2. Label elements	
Pictogram	
Signal word	Warning

Signal word

Warning

Hazard statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer.
Precautionary statements	<ul> <li>P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</li> <li>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P308+P313 IF exposed or concerned: Get medical advice/ attention.</li> <li>P501 Dispose of contents/ container in accordance with national regulations.</li> </ul>
Contains	DICHLOROMETHANE
0.0.0%	

2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

3.2. Mixtures		
DICHLOROMETHANE		60-100
CAS number: 75-09-2	EC number: 200-838-9	REACH registration number: 01- 2119480404-41-0007
<b>Classification</b> Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Carc. 2 - H351 STOT SE 3 - H336		
ZINC DIBENZYLDITHIOCARBAMATE		<1
CAS number: 14726-36-4	REACH registration number: 01- 2119543708-31-0002	
M factor (Acute) = 1	M factor (Chronic) = 1	
<b>Classification</b> Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		

The full text for all hazard statements is displayed in Section 16.

#### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b> The severity of the symptoms described will vary dependent on the concentration and length of exposure.	ine.	
Inhalation Vapours may cause drowsiness and dizziness. Irritation of nose, throat and airway.		
Ingestion May cause chemical burns in mouth and throat.		
Skin contact Prolonged skin contact may cause redness and irritation.		
Eye contact Severe irritation, burning and tearing.		
4.3. Indication of any immediate medical attention and special treatment needed		
<b>Notes for the doctor</b> No specific recommendations. If in doubt, get medical attention promptly.		
SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.		
<b>Unsuitable extinguishing</b> Do not use water jet as an extinguisher, as this will spread the fire.		
media		
5.2. Special hazards arising from the substance or mixture		
Specific hazards         The product is non-combustible. Toxic gases or vapours. No unusual fire or explosion noted.	hazards	
Hazardous combustionThermal decomposition or combustion may liberate carbon oxides and other toxic gaseproductsvapours. Oxides of carbon. Oxides of nitrogen.	es or	
5.3. Advice for firefighters		
Protective actions duringContainers close to fire should be removed or cooled with water. Do not allow water to any leaked material.	contact	
Special protective equipmentWear positive-pressure self-contained breathing apparatus (SCBA) and appropriate prfor firefightersclothing.	otective	
SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipment and emergency procedures		
Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.		
6.2. Environmental precautions		
<b>Environmental precautions</b> Do not discharge into drains or watercourses or onto the ground.		
6.3. Methods and material for containment and cleaning up		
Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignitio spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorber material.		
6.4. Reference to other sections		
<b>Reference to other sections</b> Wear protective clothing as described in Section 8 of this safety data sheet.		
SECTION 7: Handling and storage		
7.1. Precautions for safe handling		
Usage precautions Eliminate all sources of ignition. Vapours may accumulate on the floor and in low-lying Static electricity and formation of sparks must be prevented. Avoid inhalation of vapour spray/mists.		

7.2. Conditions for safe storage, including any incompatibilities

#### A08530

#### Keep away from heat, sparks and open flame. Store in closed original container at Storage precautions temperatures between 5°C and 25°C. Storage class Chemical storage. 7.3. Specific end use(s) Specific end use(s) The identified uses for this product are detailed in Section 1.2. SECTION 8: Exposure Controls/personal protection 8.1. Control parameters Occupational exposure limits DICHLOROMETHANE Long-term exposure limit (8-hour TWA): WEL 100 ppm 350 mg/m<sup>3</sup> Short-term exposure limit (15-minute): WEL 300 ppm 1060 mg/m<sup>3</sup> Sk WEL = Workplace Exposure Limit Sk = Can be absorbed through the skin. Ingredient comments WEL = Workplace Exposure Limits DICHLOROMETHANE (CAS: 75-09-2) Ingredient comments WEL = Workplace Exposure Limits DNEL Consumer - Dermal; Short term systemic effects: 353 mg/m<sup>3</sup> Workers - Dermal; Short term systemic effects: 706 mg/m<sup>3</sup> PNEC - Fresh water; 0.54 mg/l - Sediment (Freshwater); 4.47 mg/kg - Intermittent release; 0.27 mg/l - Sediment (Marinewater); 1.61 mg/kg - Marine water; 0.194 mg/l - STP; 26 mg/l - Soil; 0.583 mg/kg 8.2. Exposure controls Protective equipment Appropriate engineering Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational controls exposure limits for the product or ingredients. Eye/face protection The following protection should be worn: Chemical splash goggles or face shield. Hand protection It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Viton rubber (fluoro rubber). Other skin and body Wear suitable protective clothing as protection against splashing or contamination. Wear protection apron or protective clothing in case of contact. Hygiene measures Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling.

Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.
Environmental exposure	Keep container tightly sealed when not in use.

controls

**SECTION 9: Physical and Chemical Properties** 

#### 9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Various colours.
Odour	Characteristic.
Odour threshold	Not available.
рН	Not available.
Melting point	Not available.
Initial boiling point and range	Estimated value. 39-40°C @
Flash point	Technically not feasible.
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.17 @ 20°C
Bulk density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Data lacking.
Decomposition Temperature	Not available.
Viscosity	Kinematic viscosity > 20.5 mm²/s.
Explosive properties	Not available.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not available.
Comments	Information given is applicable to the product as supplied.
9.2. Other information	
Other information	No information required.

Refractive index	Not available.	
Particle size	Not available.	
Molecular weight	Not available.	
Volatility	Not available.	
Saturation concentration	Not available.	
Critical temperature	Not available.	
SECTION 10: Stability and re	activity	
10.1. Reactivity		
Reactivity	There are no known reactivity hazards associated with this product.	
10.2. Chemical stability		
Stability	Stable at normal ambient temperatures and when used as recommended.	
10.3. Possibility of hazardous	reactions	
Possibility of hazardous reactions	Not applicable. Not relevant.	
10.4. Conditions to avoid		
Conditions to avoid	Avoid freezing.	
10.5. Incompatible materials		
Materials to avoid	Flammable/combustible materials.	
10.6. Hazardous decompositi	on products	
Hazardous decomposition products	Does not decompose when used and stored as recommended.	
SECTION 11: Toxicological in	nformation	
11.1. Information on toxicolog	jical effects	
Acute toxicity - oral		
ATE oral (mg/kg)	3,333.33	
Inhalation	Harmful by inhalation.	
Ingestion	Harmful if swallowed.	
Skin contact	Harmful in contact with skin.	
Eye contact	Causes skin and eye irritation.	
Toxicological information on ingredients.		
DICHLOROMETHANE		
Toxicological eff	<b>iects</b> The toxicity of this substance has been assessed during REACH registration.	
Acute toxicity - oral		

Acute toxicity oral (LD₅₀2,000.0mg/kg)SpeciesRat

Acute toxicity - dermal (LDw 2,000.0         Inspire toxicity dermal (LDw 2,000.0         Species       Rat         Acute toxicity - inhalation       86.0         Acute toxicity - inhalation (vapours mg/n)       86.0         Species       Rat         Actin toxicity - inhalation (vapours mg/n)       86.0         Species       Rat         Strice rootsoin/initiation       initiating to skin., REACH dossier information.         Serious sey damage/initiation       initiating to skin., REACH dossier information.         Serious sey damage/initiation       causes eye irritation.         Serious sey damage/initiation       causes eye irritation.         Serious sey damage/initiation       Not sensitising.         Gern cell mutagenicity       Serious eye and to sensitising.         Gern cell mutagenicity       Not sensitising.         Gern consolon/initiation       Not sensitising.         Gern cell mutagenicity       Not evidence of reproductive toxicity in animal studies.         Gern cell mutagenicity       Not evidence of reproductive toxicity in animal studies.         Gern cell mutagenicity       Sevidence of rep	ATE oral (mg/kg)	2,000.0
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mg/l)         Skin corrosion/initiation       Irritating to skin., REACH dossier information.         Serious eye damage/irritation       Causes eye irritation.         Serious eye damage/irritation       Causes eye irritation.         Respiratory sensitisation       Respiratory sensitisation         Respiratory sensitisation       Not sensitising.         Gern cell mutagenicity       Feasive eye         Genotoxicity - in vivo       Negative.         Carcinogenicity       IARC Group 2B Possibly carcinogenic to humans.         Reproductive toxicity - fertility       No evidence of reproductive toxicity in animal studies.         Reproductive toxicity - fertility       No evidence of reproductive toxicity in animal studies.         Reproductive toxicity - oral       Acute toxicity oral (LDmo frequenci)         Acute toxicity oral (LDmo frequenci)       16,000.0         mg/kg)       Rabbit         ArtE oral (mg/kg)       16,000.0         Inhalation       Coughing, chest tightness, feeling of chest pressure.         Ingestion       Ingestion may cause severe irritation of the mouth, the oesophagus and the	Species	Rat
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Respiratory sensitisationNot sensitising.Germ cell mutagenicityPositive.Genotoxicity - in vitroPositive.Genotoxicity - in vivoNegative.CarcinogenicityIARC Group 2B Possibly carcinogenic to humans.Reproductive toxicityIARC Group 2B Possibly carcinogenic to humans.Reproductive toxicityNo evidence of reproductive toxicity in animal studies.fertilityNo evidence of reproductive toxicity in animal studies.Reproductive toxicity - developmentNo evidence of reproductive toxicity in animal studies.ZINC DIBENZYLDITHIOCARBAMATEAcute toxicity oral Acute toxicity oral (LDee mg/kg)16,000.0SpeciesRabbitATE oral (mg/kg)16,000.0InhalationCoughing, chest tightness, feeling of chest pressure.IngestionIngestion may cause severe irritation of the mouth, the oesophagus and the	•	Causes eye irritation.
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InhalationCoughing, chest tightness, feeling of chest pressure.IngestionIngestion may cause severe irritation of the mouth, the oesophagus and the	Species	Rabbit
Ingestion Ingestion may cause severe irritation of the mouth, the oesophagus and the	ATE oral (mg/kg)	16,000.0
• • • • • • • • • •	Inhalation	Coughing, chest tightness, feeling of chest pressure.
	Ingestion	

Skin contact	Causas mild skin irritation
Skin contact	Causes mild skin irritation.
Eye contact	Irritating and may cause redness and pain.
SECTION 12: Ecological Information	
12.1. Toxicity	
Ecological information on ingredients.	
	DICHLOROMETHANE
Acute toxicity - fish	LC50, 96 hours: 193 mg/l, Pimephales promelas (Fat-head Minnow) LC₅₀, 48 hours: 97 mg/l, Fundulus heteroclitus
Acute toxicity - aquatic invertebrates	EC₅₀, 48 hours: 27 mg/l, Daphnia magna LC₅₀, 48 hours: 109 mg/l, Palaemonetes pugio
Acute toxicity - aquatic plants	NOEC, 192 hours: 550 mg/l, Microcystis aeruginosa - Algae, blue, cyanobacteria
Acute toxicity - microorganisms	EC₅₀, 0.67 hours: 2590 mg/l, Bacteria
Chronic toxicity - fish early life stage	NOEC, 28 days: 83 mg/l, Pimephales promelas (Fat-head Minnow)
	ZINC DIBENZYLDITHIOCARBAMATE
Acute aquatic toxicity	
LE(C)50	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC₅₀, 96 hours: 10 mg/l, Brachydanio rerio (Zebra Fish)
Chronic aquatic toxicity	
M factor (Chronic)	1
12.2. Persistence and degradability	
12.3. Bioaccumulative potential	
Partition coefficient Not avai	lable.
Ecological information on ingredients.	
	DICHLOROMETHANE
Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	Not available.
12.4. Mobility in soil	
Ecological information on ingredients.	
	DICHLOROMETHANE
Mobility	The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.
	ZINC DIBENZYLDITHIOCARBAMATE

#### Mobility Insoluble in water. 12.5. Results of PBT and vPvB assessment Results of PBT and vPvB This product does not contain any substances classified as PBT or vPvB. assessment Ecological information on ingredients. DICHLOROMETHANE This product does not contain any substances classified as PBT or vPvB. Results of PBT and vPvB assessment ZINC DIBENZYLDITHIOCARBAMATE Results of PBT and vPvB This substance is not classified as PBT or vPvB according to current EU criteria. assessment 12.6. Other adverse effects Other adverse effects Not applicable. Ecological information on ingredients. DICHLOROMETHANE Other adverse effects Not applicable. SECTION 13: Disposal considerations 13.1. Waste treatment methods General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. **Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Avoid the spillage or runoff entering drains, sewers or watercourses. **SECTION 14: Transport information** 14.1. UN number UN No. (ADR/RID) 2810 UN No. (IMDG) 2810 UN No. (ICAO) 2810 UN No. (ADN) 2810 14.2. UN proper shipping name TOXIC LIQUID, ORGANIC, N.O.S. Proper shipping name (ADR/RID) Proper shipping name (IMDG) TOXIC LIQUID, ORGANIC, N.O.S. Proper shipping name (ICAO) TOXIC LIQUID, ORGANIC, N.O.S. Proper shipping name (ADN) TOXIC LIQUID, ORGANIC, N.O.S. 14.3. Transport hazard class(es) ADR/RID class 6.1

ADR/RID classification code	T1
ADR/RID label	6.1
IMDG class	6.1
ICAO class/division	6.1
ADN class	6.1

#### Transport labels

¥

14.4. Packing group			
ADR/RID packing group	III		
IMDG packing group	III		
ADN packing group	III		
ICAO packing group	III		
14.5. Environmental hazards			
<b>Environmentally hazardous su</b> No.	bstance/marine pollutant		
14.6. Special precautions for u	14.6. Special precautions for user		
EmS	F-A, S-A		
ADR transport category	2		
Hazard Identification Number (ADR/RID)	60		
Tunnel restriction code	(E)		
14.7. Transport in bulk accordi	ing to Annex II of MARPOL and the IBC Code		
SECTION 15: Regulatory infor	mation		
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture			
National regulations	The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).		
Guidance	Approved Classification and Labelling Guide (Sixth edition) L131.		
15.2. Chemical safety assessment			
No chemical safety assessment has been carried out.			

### SECTION 16: Other information

Issued by	Compliance	
Revision date	05/06/2019	
Revision	21	
Supersedes date	08/06/2016	
SDS status	Approved.	

Hazard statements in full	<ul> <li>H302 Harmful if swallowed.</li> <li>H315 Causes skin irritation.</li> <li>H319 Causes serious eye irritation.</li> <li>H336 May cause drowsiness or dizziness.</li> <li>H351 Suspected of causing cancer.</li> <li>H400 Very toxic to aquatic life.</li> <li>H410 Very toxic to aquatic life with long lasting effects.</li> </ul>
Store Between	Store Between 5'c - 25'c
Contains SVHC	NO

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



# **METHYLENE CHLORIDE (stabilizer: Amylene)**

Version 1	Revision Date	20.11.2012	Print Date 03.0	1.2014	GB / EN
SECTION 1: IDI COMPANY/UNI		F THE SUBS	TANCE/MIXTURE	AND OF THE	
1.1 Product iden	tifier				
Trade name		: METHYLENE	E CHLORIDE (stabil	lizer: Amylene)	
Substance na	ame	: dichlorometh	ane (Stabilizer: Amy	/lene)	
REACH Regi 1.2 Relevant ider	stration Number ntified uses of the	: 01-21194804 substance or i	04-41-0000 mixture and uses a	dvised against	
Use of the Substance/M		: Specific use(		Industrial and profess use Consumer use Refer to attached exp scenario Annex.	
Recommend on use	ed restrictions	: Paint stripper See Annex X		C) no 1907/2006 for	
1.3 Details of the	supplier of the sa	Conditions of Ifety data shee			
Company		-	ndustrial Chemicals t 77 I Amersfoort	bv	
Telephone Telefax E-mail addre <b>1.4 Emergency t</b> e	ss elephone number	: +3133467670 : +313346761 : industrialche		bel.com	
Emergency to number	elephone	: AkzoNobel C	hemicals-Deventer-	NL: +31 570 679211	

#### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Skin irritation, 2, H315

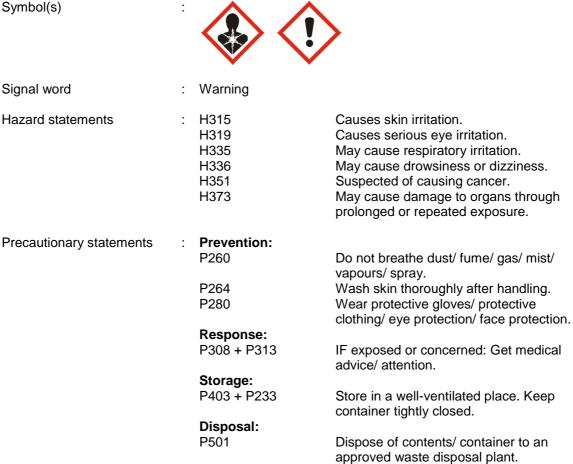
Version 1	Revision Date 20.11.2012	Print Date 03.01.2014	GB / EN		
Eye irritation, 2, H319 Carcinogenicity, 2, H351 Specific target organ toxicity - single exposure, 3, Respirator system, H335 , Central nervous system, H336					
	Specific target organ toxicity - repeated exposure, 2, H373				
For the f	ull text of the H-Statements mentio	ned in this Section, see Section 16.			
Classifi	cation (67/548/EEC, 1999/45/EC) Carcinog	enic Category 3, Xn, R40			
For the f	ull text of the R-phrases mentioned	in this Section, see Section 16.			
221 abol olo	aments				

#### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Symbol(s)

2.3



For the full list of P-statements please see section 16.

Hazardous components which must be liste	d on the label:
Dichloromethane	75-09-2
Other hazards	

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No further data available.

Version 1 Revision Date 20.11.2012 Print Date 03.01.2014 GB / EN

#### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

: CH2Cl2

#### 3.1 Substances

Formula

#### Hazardous substance

Chemical Name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Classification (67/548/EEC)	Concentration [%]
Dichloromethane		75-09-2 200-838-9 01- 2119480404- 41	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Carc. 2; H351 STOT SE 3; H335, H336 STOT RE 2; H373	Xi; R36/37/38 Carc.Cat.3; R40 R67	99.5

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the R-phrases mentioned in this Section, see Section 16.

#### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

General advice	<ul> <li>Move out of dangerous area.</li> <li>Consult a physician.</li> <li>Show this safety data sheet to the doctor in attendance.</li> </ul>
If inhaled	<ul> <li>If breathed in, move person into fresh air.</li> <li>Consult a physician after significant exposure.</li> <li>Give oxygen or artificial respiration if needed.</li> </ul>
In case of skin contact	<ul> <li>Take off contaminated clothing and shoes immediately.</li> <li>Wash off with plenty of water.</li> <li>If skin irritation persists, call a physician.</li> </ul>
In case of eye contact	<ul> <li>Remove contact lenses.</li> <li>Rinse with plenty of water.</li> <li>Protect unharmed eye.</li> <li>Keep eye wide open while rinsing.</li> <li>Obtain medical attention.</li> </ul>
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Induce vomiting, but only if victim is fully conscious. Obtain medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Nausea Vomiting Fatigue
----------	---	-------------------------------

Version 1	Revision Date 20.1	1.2012	Print Date 03.01.2014	GB / EN
		Dizzines Headach Shortnes	-	
Risks		May cau	ntrol for pneumonia and lung oedema se cardiac arrhythmia. ory disorders	
4.3 Indication	of any immediate m	nedical atter	ntion and special treatment needed	
Treatmen	nt		nptomatically. ive drugs from adrenaline-ephedrine g	group.
	FIREFIGHTING MI	EASURES		
5.1 Extinguis	hing media			
Suitable e	extinguishing media		nguishing measures that are appropria ances and the surrounding environme	
5.2 Special ha	azards arising from	he substan	ce or mixture	
firefighting	nazards during g / Specific hazards om the chemical	courses. In case o produceo Carbon r	of fire hazardous decomposition produ d such as: nonoxide n chloride	
5.3 Advice for	r firefighters			
Special p for firefigh	rotective equipment nters	: In the ev	ent of fire, wear self-contained breath	ing apparatus.
Further in	formation	water or Fire resid	fire extinguishing water from contamir the ground water system. dues and contaminated fire extinguish sed of in accordance with local regula	ing water must

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Wear respiratory protection. Ensure adequate ventilation.
6.2 Environmental precautions		
Environmental precautions	:	Do not flush into surface water or sanitary sewer sys

#### rironmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

#### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment	:	Soak up with inert absorbent material. Unsuitable material for picking up: Earth Sand
--	---	--

Version	1 Revision Date 20.1	11.2	2012 Print Date 03.01.2014	GB / EN
			Keep in suitable, closed containers for disposal.	
6.4 Ref	erence to other sections			
Ad	ditional advice	:	For personal protection see section 8.	
SECTI	ON 7: HANDLING AND S	ST(	ORAGE	
7.1 Pre	cautions for safe handling			
Ad	vice on safe handling	:	For personal protection see section 8. Avoid formation of aerosol. Do not breathe vapours or spray mist. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and nation regulations. Avoid contact with skin, eyes and clothing.	al
	vice on protection against and explosion	:	Normal measures for preventive fire protection. Vapours are heavier than air and may spread along floors Do not burn, or use a cutting torch on, the empty drum.	
7.2 Cor	nditions for safe storage, in	ncl	uding any incompatibilities	
	equirements for storage eas and containers	:	Prevent unauthorized access. Keep in a well-ventilated place.	
Ot	her data	:	Suitable container and packaging materials for safe storag Stainless steel Carbon steel	je
7.3 Spe	ecific end use(s)			
Sp	ecific use(s)	:	Refer to attached exposure scenario Annex.	

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### Components with workplace control parameters

Components	CAS-No.	Va	lue	Control parameters	Update	Basis	Form of exposure
Dichloromethan e	75-09-2	TWA	A .	100 ppm 350 mg/m3	2007-08-01	GB EH40	
	Further information	:	Sk: Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		STE	L	300 ppm 1,060 mg/m3	2007-08-01	GB EH40	
	Further information	:		Can be absorbed throu h there are concerns th ity.			

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STEL:Short term exposure limitTWA:Time Weighted Average (TWA)

#### Component: Dichloromethane DNEL/DMEL Workers

DNEL/DMEL :	Workers Inhalation Acute systemic effects 706 mg/m3
	Workers Inhalation Long-term systemic effects 353 mg/m3
	Workers Skin contact Long-term systemic effects 4750 mg/kg bw/day
	Consumers Inhalation Acute systemic effects 353 mg/m3
	Consumers Inhalation Long-term systemic effects 88.3 mg/m3
	Consumers Skin contact Long-term systemic effects 2395 mg/kg bw/day
	Consumers Ingestion Long-term systemic effects 0.06 mg/kg bw/day
Component: Dichloromethane PNEC :	Fresh water 0.54 mg/l
	Marine water 0.194 mg/l
	Intermittent water 0.27 mg/l
	Sewage treatment plant

Sewage treatment plant

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 GB / EN

26 mg/l

Fresh water sediment 4.47 mg/kg

Marine sediment 1.61 mg/kg

Soil 0.583 mg/kg

#### 8.2 Exposure controls

#### **Engineering Controls**

Effective exhaust ventilation system Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipmen Respiratory protection	<ul> <li>In the case of vapour formation use a respirator with an approved filter.</li> </ul>
Hand protection	<ul> <li>Fluorinated rubber</li> <li>Break through time: &gt; 120 min</li> <li>Glove thickness: &gt; 0.4 mm</li> </ul>
	Fluorinated rubber Break through time: > 480 min Glove thickness: > 0.8 mm
	PVA Break through time: > 480 min Glove thickness: > 0.8 mm
	butyl-rubber Break through time: > 10 min Glove thickness: > 0.4 mm
	Protective gloves complying with EN 374.
Eye protection	<ul> <li>Safety glasses with side-shields conforming to EN166 or Face-shield</li> </ul>
Skin and body protection	Wear suitable protective clothing. Boots
Hygiene measures	<ul> <li>Handle in accordance with good industrial hygiene and safety practice.</li> <li>When using do not eat or drink.</li> <li>When using do not smoke.</li> <li>Wash hands before breaks and at the end of workday.</li> </ul>

#### **Environmental exposure controls**

General advice	: Do not flush into surface water or sanitary sewer system
----------------	--

If the product contaminates rivers and lakes or drains inform respective authorities.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties			
Appearance			
Form	:	Clear liquid	
Colour	:	colourless	
Odour	:	sweet	
Odour Threshold	:	no data available	
Safety data			
рН	:	not applicable	
Melting point	:	ca97 °C at 1,013 hPa	
Boiling point	:	40 °C at 1,013 hPa	
Flash point	:	does not flash	
Evaporation rate	:	no data available	
Flammability (solid, gas)	:	The product is not flammable.	
Lower explosion limit	:	13 %(V)	
Upper explosion limit	:	22 %(V)	
Vapour pressure	:	476 hPa at 20 °C 584 hPa at 25 °C 709 hPa at 30 °C	
Relative vapor density	:	2.93 at 25 °C	
Relative density	:	1.359 at 20 °C	
Water solubility	:	ca. 20 g/l at 20 °C	
Solubility in other solvents	:	miscible with most organic solvents	
Partition coefficient: n- octanol/water	:	log Pow: 1.25 at 20 °C	
Auto-ignition temperature	:	605 °C at 1,013 hPa	

Version 1	Revision Date 20	.11.2012	Print Date 03.01.2014	GB / EN
Decompo	osition temperature	: > 120 °0	С	
Viscosity	, dynamic	: 0.42 mF	Pa.s at 25 °C	
Viscosity	, kinematic	: no data	available	
Explosive	e properties	: Not exp	losive	
Oxidizing	properties	: Not clas	ssified as oxidising.	

#### 9.2 Other information

: not applicable

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

#### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under normal conditions.

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

#### 10.4 Conditions to avoid

Conditions to avoid	: Avoid elevated temperatures
---------------------	-------------------------------

#### 10.5 Incompatible materials

Materials to avoid	: Zinc Magnesium Finely divided aluminium Strong bases Alkali metals Strong oxidizing agents Alkaline earth metals
	Alkaline earth metals

#### **10.6 Hazardous decomposition products**

Hazardous decomposition products	: Hydrogen chloride Carbon monoxide Phosgene
Thermal decomposition	: > 120 °C

#### SECTION 11: TOXICOLOGICAL INFORMATION

#### Product information: Hazard Summary Inhalation

: Inhalation of vapou	urs is irritating to the respiratory system,
may cause throat	pain and cough.

Version 1	Revision Date 20.11	2012 Print Date 03.	.01.2014	GB / EN
		Thermal decomposition can and vapours. Inhalation may cause centra	n lead to release of irritating on al nervous system effects.	jases
Skin		Causes skin irritation.		
Eyes		Causes serious eye irritation	n.	
Ingestion		May be harmful if swallowed	d.	
11.1 Information	on toxicological e	fects		
	data for the compo Assessment thane	nents:		
CMR effects	3	Carcinogenicity: Limited evi studies	dence of carcinogenicity in a	inimal
Test result				
Dichlorome Acute oral to		LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guidel	ine 401	
Acute inhala	tion toxicity	LC50: 86 mg/l Exposure time: 4 h Species: rat		
Acute derma	al toxicity	LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guidel	line 402	
Skin irritation	n	Species: rabbit Irritating to skin. Method: OECD Test Guidel	line 404	
Eye irritation	1	Species: rabbit Irritating to eyes.		
Sensitisatior	1	Species: mouse Not sensitizing. Method: OECD Guide-line 4 Lymph Node Assay	429 - Skin Sensitzation: Loca	al
Repeated do	ose toxicity	Species: rat Application Route: Oral Exposure time: 104 weeks NOEL: 6 Method: OECD Test Guidel		
		Species: rat Application Route: Inhalatio Exposure time: 104 weeks NOEL: 200		

#### Revision Date 20.11.2012 Print Date 03.01.2014 Version 1 GB / EN Method: OECD Test Guideline 453 Germ cell mutagenicity Genotoxicity in vitro : In vitro cytogenetic test in CHO cells: positive Method: OECD guide-line 476 - In vitro Mammalian Cell Gene Mutation Test In vitro gene mutation study in mammalian cells negative Method: Other guidelines Ames test positive Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Genotoxicity in vivo : Chromosome aberration test in vivo Species: mouse Method: Mutagenicity (micronucleus test) negative Reproductive toxicity/Fertility : Method: OECD Test Guideline 416 Species: rat **Application Route: Inhalation** Reproductive ÷ Method: OECD Test Guideline 414 toxicity/Development/Teratog Species: mouse enicitv **Application Route: Inhalation** Method: OECD Test Guideline 414 Species: rat **Application Route: Inhalation** Target Organ Systemic : May cause respiratory irritation. Toxicant - Single exposure May cause drowsiness or dizziness. Target Organ Systemic : Species: rat **Toxicant - Repeated** Application Route: Oral Exposure time: 104 weeks () exposure NOEL: 6 Method: OECD Test Guideline 453 Species: rat **Application Route: Inhalation** Exposure time: 104 weeks () NOEL: 200 Method: OECD Test Guideline 453 Exposure routes: Inhalation Target Organs: Blood, Central nervous system May cause damage to organs through prolonged or repeated exposure. Exposure routes: Ingestion Target Organs: Blood, Liver

## **METHYLENE CHLORIDE (stabilizer: Amylene)**

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	May cause damage to organs through prolonged or repeated exposure.
SECTION 12: ECOLOGICAL IN	FORMATION
Product information: Ecotoxicology Assessment Additional ecological information 2.1 Toxicity	: None known.
Components: Ecotoxicology Assessment Dichloromethane Results of PBT assessment	: Not classified as PBT or vPvB
Test result Dichloromethane Toxicity to fish	: LC50: 193 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow) flow-through test Method: Other guidelines
	LC50: 97 mg/l Exposure time: 48 h Species: Fundulus heteroclitus Marine water Method: Other guidelines
Toxicity to daphnia and other aquatic invertebrates	: LC50: 27 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Fresh water Method: EPA-660/3-75-009
	LC50: 109 mg/l Exposure time: 48 h Species: Palaemonetes pugio Marine water Method: Other guidelines
Toxicity to algae	: NOEC: 550 mg/l Exposure time: 192 h

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GB / EN

Cell multiplication inhibition testToxicity to bacteria: EC50: 2,590 mg/l<br/>Exposure time: 0.67 h<br/>Respiration inhibition<br/>Method: OECD Guide-line 209Toxicity to fish (Chronic<br/>toxicity): NOEC: 83 mg/l<br/>Exposure time: 28 d<br/>Species: Pimephales promelas (fathead minnow)<br/>flow-through test

Species: Microcystis aeruginosa - Algae, blue, cyanobacteria

Method: Other guidelines

Version 1 Revision Date	20.11.2012 Print Date 03.01.2014	GB / El
Components: Dichloromethane Biodegradability	: aerobic Readily biodegradable. 66 % Method: OECD Test Guideline 3011	D
12.3 Bioaccumulative potentia	l	
Components: Dichloromethane Bioaccumulation	: No bioaccumulation is to be expected	ed (log Pow <= 4).
12.4 Mobility in soil		
Components: Dichloromethane Mobility	: Medium: Soil no data available	
2.5 Results of PBT and vPvB	assessment	
Components: Dichloromethane PBT and vPvB assessmen	: Not classified as PBT or vPvB	
2.6 Other adverse effects		
<b>Components:</b> <b>Dichloromethane</b> Biochemical Oxygen Demand (BOD)	: no data available	
SECTION 13: DISPOSAL C	INSIDERATIONS	
3.1 Waste treatment method		
Product	<ul> <li>Dispose of as hazardous waste in c national regulations.</li> <li>Where possible recycling is preferre incineration.</li> </ul>	
Contaminated packaging	: Dispose of contents/container in ac regulation.	cordance with local
SECTION 14: TRANSPORT	NFORMATION	
4.1 UN number		
ADR RID IMDG IATA	: 1593 : 1593 : 1593 : 1593	
14.2 Proper shipping name		

: DICHLOROMETHANE

: DICHLOROMETHANE

ADR

RID

Version 1 Revision Date 20	.11.2012	Print Date 03.01.2014	GB / El
IMDG		ROMETHANE	
IATA	: Dichloron		
4.3 Transport hazard class		inot la lo	
-			
ADR	: 6.1		
RID	: 6.1		
	: 6.1		
ΙΑΤΑ	: 6.1		
4.4 Packing group			
ADR			
Packaging group	: 111		
Classification Code	: T1		
Hazard identification No	: 60		
Labels	: 6.1		
Tunnel restriction code <b>RID</b>	: (E)		
Packaging group	: 111		
Classification Code	: T1		
Hazard identification No	: 60		
Labels	: 6.1		
IMDG			
Packaging group	: 111		
Labels	: 6.1		
EmS Number IATA	: F-A, S-A		
Packing instruction (cargo aircraft)	: 663		
Packaging group	: 111		
Labels	: 6.1		
4.5 Environmental hazards			
ADR			
Environmentally hazardous <b>RID</b>	: no		
Environmentally hazardous IMDG	: no		
Marine Pollutant IATA	: no		
Environmentally hazardous	: no		
4.6 Special precautions for use	er		
Handle with care.			
4.7 Transport in bulk according	a to Annex II d	of MARPOL 73/78 and the IBC Code	2

no data available

#### SECTION 15: REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Major Accident Hazard	:	96/82/EC	Update: 2003
Legislation		Directive 96/82	2/EC does not apply

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Water contaminating class : WGK 2 water endangering (Germany)

#### Notification status

CH INV	: YES. The formulation contains substances listed on the Swiss Inventory
US.TSCA	: YES. All chemical substances in this product are either listed on the
	TSCA Inventory or in compliance with a TSCA Inventory exemption.
DSL	: YES. All components of this product are on the Canadian DSL.
AICS	: YES. On the inventory, or in compliance with the inventory
NZIoC	: YES. On the inventory, or in compliance with the inventory
ENCS	: YES. On the inventory, or in compliance with the inventory
ISHL	: YES. On the inventory, or in compliance with the inventory
KECI	: YES. On the inventory, or in compliance with the inventory
PICCS	: YES. On the inventory, or in compliance with the inventory
IECSC	: YES. On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

#### **15.2 Chemical Safety Assessment**

Dichloromethane

: A Chemical Safety Assessment has been carried out for this substance.

#### **SECTION 16: OTHER INFORMATION**

Full text of H-Stateme	nts referred to under sections 2 and 3.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
Full text of R-phrases	referred to under sections 2 and 3
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R67	Vapours may cause drowsiness and dizziness.
Full list of P-statemen	ts.
Prevention:	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ eye protection/ face protection.
Response:	

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P302 + F	P352	IF ON SKIN: Was	sh with plenty of soap and water.	
P304 + F	P340	IF INHALED: Rer comfortable for b	move victim to fresh air and keep at rest reathing.	t in a position
P305 + F	P351 + P338		e cautiously with water for several minu present and easy to do. Continue rinsir	
P308 + F	P313	IF exposed or co	ncerned: Get medical advice/ attention.	-
P362			nated clothing and wash before reuse.	
Storage:			,	
P403 + F P405	233	Store in a well-ve Store locked up.	entilated place. Keep container tightly clo	osed.
Disposal	:			
P501		Dispose of conte	nts/ container to an approved waste dis	posal plant.

#### Explanations for possible abbreviations mentioned in section 2

- PBT : PBT: Persistent, bioaccumulative and toxic.
- vPvB : vPvB: Very persistent and very bioaccumulative.
- OEL : OEL: Occupational exposure limit.

#### Notification status explanation

CH INV	Switzerland. New notified substances and declared preparations
US.TSCA	United States TSCA Inventory
DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances (METI)
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances
	(PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)

#### **Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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#### Annex :

- 1. Manufacture, Recycling, Distribution of substance
- 2. Intermediate
- 3. Formulation & (re)packing of substances and mixtures
- 4. Use as Process chemical
- 5. Use in Paints/ Coatings (industrial)
- 6. Use in cleaning agents
- 7. Use of blowing agents in manufacture of foam
- 8. Use in/as functional fluids (industrial)
- 9. Use in Paints/Coatings
- 10. Use in cleaning agents
- 11. Use in cosmetics
- 12. Use in agrochemicals (professional)
- 13. Packing and repacking of formulations
- 14. Laboratory Reagents
- 15. Consumer use

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# 1. Short title of Exposure Scenario: Manufacture, Recycling, Distribution of substance Main User Groups : SU 3: Industrial uses: Uses of substances as such or in

Sectors of end-use	preparations at industrial sites : SU8, SU9: Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals
Environmental Release Categories	: ERC1: Manufacture of substances
Process categories	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non- dedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15: Use as laboratory reagent</li> </ul>

# 2.1 Contributing scenario controlling environmental exposure for: ERC1: Manufacture of substances

Amount used Daily amount per site Annual amount per site	: 8570 kg : 2570 tonnes
Environment factors not influenced I	ov risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a Continuous use/release Number of emission days per	ffecting environmental exposure : 300
year Emission or Release Factor: Air	- 0.00060 %
Emission of Release Factor: Water	
Emission or Release Factor: Soil Remarks	: 0 % : Indoor use, Used in closed system
Technical conditions and measures Air	<ul> <li>Organizational measures</li> <li>No air emission controls required; required removal efficiency is 0%.</li> </ul>

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Water	:	Treat on-site wastewater (prior to receiving v discharge). (Effectiveness (of a measure): 93	
Soil	:	Soil emission controls are not applicable as direct release to soil.	
Remarks	:	Common practices vary across sites thus co process release estimates used.	onservative
Water	:	Prevent discharge of undissolved substance from wastewater.	e to or recover
Conditions and	d measures related to m	inicipal sewage treatment plant	
Type of Sew	age Treatment Plant :	Sewage treatment plant	
Flow rate of plant effluen	0	63,072 m3/day	
	removed from waste :	93.5 %	
Remarks	:	Domestic sewage treatment is not assumed.	

# 2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	<ul> <li>Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.</li> </ul>
Technical conditions and measures Handle substance within a closed s	

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.3 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics	
Concentration of the Substance	: Covers the percentage of the substance in the product up
in Mixture/Article	to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa

		-		
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Frequency an Remarks	d duration of use	differer : , Assur	daily exposures up to 8 hours (un ntly). nes use at not more than 20°C abo ature., Assumes a good basic stan	ve ambient
			tional hygiene is implemented.	
	ditions and measures stance within a closed s	system.		
Avoid direct gloves (teste soon as they	skin contact with prod ed to EN374) if hand co / occur. Wash off any s	uct. Identi ntact with kin contar	ses, dispersion and exposure fy potential areas for indirect skin substance likely. Clean up contam nination immediately. Provide basi to report any skin problems that m	ination/spills as ic employee
			rotection, hygiene and health eval iveness (of a measure): 80 %)	uation
	ting scenario control hthesis or formulation		er exposure for: PROC3: Use in	closed batch
in Mixture/A	ion of the Substance	to 100 9	the percentage of the substance i % (unless stated differently). vapour pressure > 10 kPa	n the product up
Frequency an Remarks	d duration of use	: Covers differer	daily exposures up to 8 hours (un htly).	less stated
		temper	nes use at not more than 20°C abo ature., Assumes a good basic stan tional hygiene is implemented.	
Handle subs	ditions and measures stance within a predomi ss (of a measure): 90 %		sed system provided with extract v	ventilation.
Avoid direct gloves (teste soon as they	skin contact with prod ed to EN374) if hand co / occur. Wash off any s	uct. Identi ntact with kin contar	ses, dispersion and exposure fy potential areas for indirect skin substance likely. Clean up contam nination immediately. Provide basi to report any skin problems that m	ination/spills as ic employee
			protection, hygiene and health eval iveness (of a measure): 80 %)	uation

2.5 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

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in Mixture/Ar	on of the Substance	to 10	rs the percentage of the substance 0 % (unless stated differently). d, vapour pressure > 10 kPa	in the product up
Frequency and Remarks	duration of use		ers daily exposures up to 8 hours (u rently).	nless stated
		temp	umes use at not more than 20°C ab erature., Assumes a good basic sta pational hygiene is implemented.	
	litions and measures ction ventilation at p		ere emissions occur. (Effectiveness	(of a measure): 90
Avoid direct s gloves (tested soon as they training to pro	skin contact with pro d to EN374) if hand co occur. Wash off any event / minimise expo I measures related to	duct. Ider ontact wit skin cont osures ar o persona	eases, dispersion and exposure htify potential areas for indirect skin th substance likely. Clean up conta camination immediately. Provide ba nd to report any skin problems that I protection, hygiene and health eva ctiveness (of a measure): 80 %)	mination/spills as sic employee may develop.
	preparation (charg		rker exposure for: PROC8a: Tra harging) from/ to vessels/ large	
in Mixture/Ar	on of the Substance	to 10	rs the percentage of the substance 0 % (unless stated differently). d, vapour pressure > 10 kPa	in the product up
Frequency and Remarks	duration of use		ers daily exposures up to 8 hours (u rently).	nless stated
		temp	umes use at not more than 20°C ab erature., Assumes a good basic sta	
			pational hygiene is implemented.	

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

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Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.7 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Fill containers/cans at dedicated fi (Effectiveness (of a measure): 97 %	illing points supplied with local extract ventilation.
Avoid direct skin contact with proo gloves (tested to EN374) if hand co soon as they occur. Wash off any	: /limit releases, dispersion and exposure duct. Identify potential areas for indirect skin contact. Wear ontact with substance likely. Clean up contamination/spills as skin contamination immediately. Provide basic employee osures and to report any skin problems that may develop.
	personal protection, hygiene and health evaluation 374. (Effectiveness (of a measure): 80 %)
0	Iling worker exposure for: PROC9: Transfer of substance ters (dedicated filling line, including weighing)
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>

Frequency and duration of use Remarks

: Covers daily exposures up to 8 hours (unless stated differently).

: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

#### Technical conditions and measures

Fill containers/cans at dedicated filling points supplied with local extract ventilation. (Effectiveness (of a measure): 90 %)

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Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.9 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

#### Contributing Specific Value RCR Exposure Compartme Level of Scenario Assessment conditions Exposure nt Method EUSES ERC1 Fresh water 5.17 µg/L 0.00957 ERC1 EUSES Marine 0.416 µg/L 0.00214 water ERC1 EUSES Fresh water 0.00957 9.3 µg/kg sediment wwt ERC1 EUSES Marine 0.749 µg/kg 0.00214 sediment wwt EUSES Soil 0.126 µg/kg 0.000245 ERC1 ERC1 EUSES Groundwate 0.0498 µg/L 0.000092 r

#### Environment

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ERC1	EUSES	Sewage treatment plant	0.883 µg/L	0.000034

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	0.01 ppm	0.0001
PROC1	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC2	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC2	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.27 mg/kg/day	0.00006
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC4	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003
PROC8a	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC8a	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	2.74 mg/kg/day	0.0006
PROC8b	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	4.5 ppm	0.05
PROC8b	ECETOC TRA		Chronic	1.37	0.0003

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	v2.0 Worker	dermal mg/kg/day systemic exposure	
PROC9	ECETOC TRA v2.0 Worker	Chronic 20 ppm inhalation systemic exposure	0.2
PROC9	ECETOC TRA v2.0 Worker	Chronic 1.37 dermal mg/kg/day systemic exposure	0.0003
PROC15	ECETOC TRA v2.0 Worker	Chronic 50 ppm inhalation systemic exposure	0.5
PROC15	ECETOC TRA v2.0 Worker	Chronic 0.07 dermal mg/kg/day systemic exposure	0.00001

ERC1: Manufacture of substances

PROC1: Use in closed process, no likelihood of exposure

PROC15: Use as laboratory reagent

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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#### 1. Short title of Exposure Scenario: Intermediate Main User Groups : SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites Sectors of end-use : SU8, SU9: Manufacture of bulk, large scale chemicals (including petroleum products), Manufacture of fine chemicals **Environmental Release** : ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) Categories : PROC1: Use in closed process, no likelihood of exposure **Process categories** PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at nondedicated facilities PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC15: Use as laboratory reagent

2.1 Contributing scenario controlling environmental exposure for: ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

Amount used

Daily amount per site	: 8567 kg
Annual amount per site	: 2570 tonnes
Environment factors not influenced	by risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a	affecting environmental exposure
Continuous use/release	
Number of emission days per	: 300
year	
Emission or Release Factor: Air	
Emission or Release Factor:	: 0.01 %
Water	• • • ·
Emission or Release Factor: Soil	
Remarks	: Indoor use, Used in closed system
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal
	efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a
	WWTP. (Effectiveness (of a measure): 93.5 %)

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Soil		:	Soil emission controls are not applicable a	s there is no
Water		:	direct release to soil. Prevent discharge of undissolved substand from wastewater.	ce to or recove
Conditions a	nd measures related to	mι	inicipal sewage treatment plant	
Type of Sev	wage Treatment Plant	:	Municipal sewage treatment plant	
	of sewage treatment		2,000 m3/day	
Percentage	e removed from waste	:	93.5 %	

2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.3 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).

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		: , Assumes use at not more than 20°C ab temperature., Assumes a good basic sta occupational hygiene is implemented.	
	nditions and measures ostance within a closed s	ystem.	
Avoid direc gloves (tes soon as the	et skin contact with prod ted to EN374) if hand co ey occur. Wash off any s	/limit releases, dispersion and exposure uct. Identify potential areas for indirect skin ntact with substance likely. Clean up contar kin contamination immediately. Provide bas sures and to report any skin problems that	mination/spills as sic employee
		personal protection, hygiene and health eva 74. (Effectiveness (of a measure): 80 %)	aluation
	uting scenario control nthesis or formulation	ling worker exposure for: PROC3: Use i n)	n closed batch
in Mixture	tion of the Substance	<ul> <li>Covers the percentage of the substance to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>	in the product up
Frequency a Remarks	nd duration of use	: Covers daily exposures up to 8 hours (u differently).	nless stated
		: , Assumes use at not more than 20°C ab temperature., Assumes a good basic sta occupational hygiene is implemented.	
Handle sub	nditions and measures stance within a predomi ess (of a measure): 90 %	nantly closed system provided with extract )	ventilation.
Avoid direc gloves (tes soon as the	et skin contact with prod ted to EN374) if hand co ey occur. Wash off any s	/limit releases, dispersion and exposure uct. Identify potential areas for indirect skin ntact with substance likely. Clean up contar kin contamination immediately. Provide bas sures and to report any skin problems that	mination/spills as sic employee
		personal protection, hygiene and health eva 74. (Effectiveness (of a measure): 80 %)	aluation
		ling worker exposure for: PROC4: Use i opportunity for exposure arises	n batch and
in Mixture	tion of the Substance	<ul> <li>Covers the percentage of the substance to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>	in the product up

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Frequency ar Remarks	nd duration of use	Covers daily exposures up to 8 hours (u differently).	nless stated
	:	, Assumes use at not more than 20°C about temperature., Assumes a good basic state occupational hygiene is implemented.	
	nditions and measures raction ventilation at point	s where emissions occur. (Effectiveness	(of a measure): 90
Avoid direc gloves (test soon as the	t skin contact with produc ed to EN374) if hand conta y occur. Wash off any skir	nit releases, dispersion and exposure t. Identify potential areas for indirect skin act with substance likely. Clean up contar n contamination immediately. Provide bas res and to report any skin problems that r	nination/spills as sic employee
		rsonal protection, hygiene and health eva (Effectiveness (of a measure): 80 %)	luation
substance o non-dedicat Product char Concentrat in Mixture/	or preparation (charging, ed facilities acteristics ion of the Substance : Article	g worker exposure for: PROC8a: Tran / discharging) from/ to vessels/ large Covers the percentage of the substance to 100 % (unless stated differently). Liquid, vapour pressure > 10 kPa	containers at
Frequency ar Remarks	nd duration of use	Covers daily exposures up to 8 hours (un differently).	nless stated
	:	, Assumes use at not more than 20°C about temperature., Assumes a good basic state occupational hygiene is implemented.	
		pment prior to break-in or maintenance. (	Effectiveness (of a
Avoid direc gloves (test soon as the	t skin contact with produc ed to EN374) if hand conta y occur. Wash off any skir	nit releases, dispersion and exposure t. Identify potential areas for indirect skin act with substance likely. Clean up contar n contamination immediately. Provide bas res and to report any skin problems that r	nination/spills as sic employee
Conditions a	nd measures related to pe	rsonal protection, hygiene and health eva	luation

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2.7 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Fill containers/cans at dedicated fi (Effectiveness (of a measure): 97 %	illing points supplied with local extract ventilation.
Avoid direct skin contact with pro	/limit releases, dispersion and exposure duct. Identify potential areas for indirect skin contact. Wear ontact with substance likely. Clean up contamination/spills as

training to prevent / minimise exposures and to report any skin problems that may develop. Conditions and measures related to personal protection, hygiene and health evaluation

soon as they occur. Wash off any skin contamination immediately. Provide basic employee

Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.8 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory	
reagent	

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

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#### 3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC6a	EUSES		Fresh water		0.057 mg/L	0.105
ERC6a	EUSES		Marine water		0.0056 mg/L	0.029
ERC6a	EUSES		Fresh water sediment		0.102 mg/kg wet weight	0.105
ERC6a	EUSES		Marine sediment		0.01 mg/kg wet weight	0.029
ERC6a	EUSES		Soil		0.058 mg/kg dry weight	0.11
ERC6a	EUSES		Groundwate r		0.012 mg/L	0.02
ERC6a	EUSES		Sewage treatment plant		0.517 mg/L	0.020

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	0.01 ppm	0.0001
PROC1	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC2	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC2	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.27 mg/kg/day	0.00006
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001

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PROC4	ECETOC TRA v2.0 Worker	Chronic 10 ppm inhalation systemic exposure	0.1
PROC4	ECETOC TRA v2.0 Worker	Chronic 1.37 dermal mg/kg/da systemic exposure	0.0003 y
PROC8a	ECETOC TRA v2.0 Worker	Chronic 50 ppm inhalation systemic exposure	0.5
PROC8a	ECETOC TRA v2.0 Worker	Chronic 2.74 dermal mg/kg/da systemic exposure	0.0006 y
PROC8b	ECETOC TRA v2.0 Worker	Chronic 4.5 ppm inhalation systemic exposure	0.05
PROC8b	ECETOC TRA v2.0 Worker	Chronic 1.37 dermal mg/kg/da systemic exposure	0.0003 y
PROC15	ECETOC TRA v2.0 Worker	Chronic 50 ppm inhalation systemic exposure	0.5
PROC15	ECETOC TRA v2.0 Worker	Chronic 0.07 dermal mg/kg/da systemic exposure	0.00001 y

ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates) PROC1: Use in closed process, no likelihood of exposure

PROC15: Use as laboratory reagent

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

# 4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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# 1. Short title of Exposure Scenario: Formulation & (re)packing of substances and mixtures

Main User Groups	: SU 3: Industrial uses: Uses of substances as such or in
	preparations at industrial sites
Sectors of end-use	: SU 10: Formulation [mixing] of preparations and/ or re- packaging (excluding alloys)
Environmental Release Categories	: ERC2: Formulation of preparations
Process categories	: PROC3: Use in closed batch process (synthesis or formulation)
	PROC4: Use in batch and other process (synthesis)
	where opportunity for exposure arises
	PROC5: Mixing or blending in batch processes for
	formulation of preparations and articles (multistage and/ or significant contact)
	PROC8a: Transfer of substance or preparation (charging/
	discharging) from/ to vessels/ large containers at non- dedicated facilities
	PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15: Use as laboratory reagent

## 2.1 Contributing scenario controlling environmental exposure for: ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

Activity	: Paint strippers
Amount used Daily amount per site Annual amount per site	: 797 kg : 239 tonnes

Environment factors not influenced by risk management Flow rate : 18,000 m3/day

Other given operational conditions affecting environmental exposure

Continuous use/release		
Number of emission days per	:	300
year		
Emission or Release Factor: Air	:	0.025 %
Emission or Release Factor:	:	0.02 %
Water		
Emission or Release Factor: Soil	:	0 %
Remarks	:	Indoor use

Technical conditions and measures / Organizational measuresAir: No air emission controls required; required removal

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Water	:	efficiency is 0%. Ensure all waste water is collected and trea WWTP., Prevent discharge of undissolved s	
Soil	:	or recover from wastewater. Soil emission controls are not applicable as direct release to soil.	s there is no
Conditions and m	easures related to mu	nicipal sewage treatment plant	
		Municipal sewage treatment plant	
•••		2,000 m3/day	
•	noved from waste :	93.5 %	
	•	g environmental exposure for: ERC6a: I substance (use of intermediates)	ndustrial use

Activity	: Aerosols
Amount used Daily amount per site Annual amount per site	: 3334 kg : 1000 tonnes
Environment factors not influenced Flow rate	by risk management : 18,000 m3/day
	· ·
Other given operational conditions a Continuous use/release	affecting environmental exposure
Number of emission days per year	: 300
Emission or Release Factor: Air	: 0.025 %
Emission or Release Factor: Water	: 0.02 %
Emission or Release Factor: Soil	
Remarks	: Indoor use
Technical conditions and measures	/ Organizational measures
Air	<ul> <li>No air emission controls required; required removal efficiency is 0%.</li> </ul>
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to
Soil	or recover from wastewater. : Soil emission controls are not applicable as there is no direct release to soil.
Conditions and measures related to	municipal sewage treatment plant
Type of Sewage Treatment Plant	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	: 2,000 m3/day
Percentage removed from waste water	: 93.5 %

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2.1 Contributing scenario controlling environmental exposure for: ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

Activity	: Metal degreasers
Amount used Daily amount per site Annual amount per site	: 3933 kg : 1180 tonnes
Environment factors not influenced	
Flow rate	: 18,000 m3/day
Other given operational conditions a Continuous use/release	ffecting environmental exposure
Number of emission days per year	: 300
Emission or Release Factor: Air	: 0.025 %
Emission or Release Factor: Water	: 0.02 %
Emission or Release Factor: Soil	
Remarks	: Indoor use
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to
0.11	or recover from wastewater.
Soil	: Soil emission controls are not applicable as there is no direct release to soil.
Conditions and measures related to	
	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	: 2,000 m3/day
Percentage removed from waste water	: 93.5 %

2.1 Contributing scenario controlling environmental exposure for: ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

Activity	: Coatings and paints, thinners, paint removers
Amount used Daily amount per site Annual amount per site	: 1898 kg : 569 tonnes

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Flow rate		:	18,000 m3/day	
Other given op Continuous		ffe	cting environmental exposure	
Number of e year	mission days per	:	300	
Émission or Emission or	Release Factor: Air Release Factor:	-	0.01 % 0 %	
Water Emission or Remarks	Release Factor: Soil	-	0 % Indoor use	
	ditions and measures	-	rganizational measures	
Air			No air emission controls required; required re efficiency is 0%.	emoval
Water		:	Ensure all waste water is collected and treate WWTP., Prevent discharge of undissolved su or recover from wastewater.	
Soil		:	Soil emission controls are not applicable as t direct release to soil.	here is no
			inicipal sewage treatment plant	
	sewage treatment		Municipal sewage treatment plant 2,000 m3/day	
•	removed from waste	:	93.5 %	

# 2.5 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Handle substance within a predom (Effectiveness (of a measure): 90 %	inantly closed system provided with extract ventilation.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

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Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.6 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>	
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).	
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.	
Technical conditions and measures Provide extraction ventilation at p %)	s points where emissions occur. (Effectiveness (of a measure): 90	
Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.		
Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)		
	olling worker exposure for: PROC5: Mixing or blending in of preparations and articles (multistage and/ or	
Product characteristics Concentration of the Substance	: Covers the percentage of the substance in the product up	

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

#### Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

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Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.8 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

**Technical conditions and measures** 

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.9 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).

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: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Fill containers/cans at dedicated filling points supplied with local extract ventilation. (Effectiveness (of a measure): 97 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.10 Contributing scenario controlling worker exposure for: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

in Mixture/Article	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Fill containers/cans at dedicated fill (Effectiveness (of a measure): 90 %	ing points supplied with local extract ventilation. )

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.11 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics	
Concentration of the Substance	: Covers the percentage of the substance in the product up

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in Mixture/Ar Physical For	ticle m (at time of use)		00 % (unless stated differently). uid, vapour pressure > 10 kPa	
Frequency and Remarks	duration of use		vers daily exposures up to 8 hours (un erently).	less stated
		tem	sumes use at not more than 20°C abo perature., Assumes a good basic stan upational hygiene is implemented.	

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC2	EUSES	Paint strippers	Fresh water		0.283 mg/L	0.524
ERC2	EUSES	Paint strippers	Marine water		0.0282 mg/L	0.145
ERC2	EUSES	Paint strippers	Fresh water		0.509 mg/kg	0.524
			sediment		wet weight	
ERC2	EUSES	Paint strippers	Marine		0.0507	0.145
			sediment		mg/kg wet	
					weight	
ERC2	EUSES	Paint strippers	Soil		0.308 mg/kg	0.599
					dry weight	
ERC2	EUSES	Paint strippers	Groundwate r		0.0639 mg/L	0.118
ERC2	EUSES	Paint strippers	Sewage treatment plant		2.78 mg/L	0.107
ERC2	EUSES	Aerosol	Fresh water		4.96 µg/L	0.00919
ERC2	EUSES	Aerosol	Marine water		4.00 µg/L	0.00206
ERC2	EUSES	Aerosol	Fresh water sediment		8.93 µg/kg wwt	0.00919
ERC2	EUSES	Aerosol	Marine sediment		0.72 µg/kg wwt	0.00206
ERC2	EUSES	Aerosol	Soil		-	0.00251
ERC2	EUSES	Aerosol	Groundwate		1.29 µg/kg	0.00231
_			r		1.26 µg/L	
ERC2	EUSES	Aerosol	Sewage		1.06 µg/L	0.00004

#### Environment

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			treatment plant		
ERC2	EUSES	Metal degreasers	Fresh water	0.259 mg/L	0.480
ERC2	EUSES	Metal degreasers	Marine water	0.029 mg/L	0.133
ERC2	EUSES	Metal degreasers	Fresh water sediment	0.467 mg/kg wet weight	0.480
ERC2	EUSES	Metal degreasers	Marine sediment	0.047 mg/kg wet weight	0.133
ERC2	EUSES	Metal degreasers	Soil	0.283 mg/kg dry weight	0.550
ERC2	EUSES	Metal degreasers	Groundwate r	0.059 mg/L	0.110
ERC2	EUSES	Metal degreasers	Sewage treatment plant	2.54 mg/L	0.098
ERC2	EUSES	Adhesives, sealants	Fresh water	4.85 μg/L	0.0090
ERC2	EUSES	Adhesives, sealants	Marine water	0.39 µg/L	0.0020
ERC2	EUSES	Adhesives, sealants	Fresh water sediment	8.74 μg/kg wwt	0.0090
ERC2	EUSES	Adhesives, sealants	Marine sediment	0.701 μg/kg wwt	0.0020
ERC2	EUSES	Adhesives, sealants	Soil	0.419 µg/kg	0.0073
ERC2	EUSES	Adhesives, sealants	Groundwate r	0.440 µg/L	0.0008
ERC2	EUSES	Adhesives, sealants	Sewage treatment plant	0 mg/L	0

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC4	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003

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PROC8a	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	25 ppm	0.25
PROC8a	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	2.74 mg/kg/day	0.0006
PROC8a	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	25 ppm	0.25
PROC8a	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	2.74 mg/kg/day	0.0006
PROC8b	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	4.5 ppm	0.05
PROC8b	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003
PROC9	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	20 ppm	0.2
PROC9	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003
PROC15	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	50 ppm	0.5
PROC15	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001

ERC2: Formulation of preparations

PROC15: Use as laboratory reagent

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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#### 1. Short title of Exposure Scenario: Use as Process chemical

Main User Groups	: SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	: SU5, SU9: Manufacture of textiles, leather, fur, Manufacture of fine chemicals
Environmental Release Categories	: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Process categories	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or</li> </ul>
	formulation)
	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
	PROC10: Roller application or brushing PROC15: Use as laboratory reagent

# 2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Activity	: solvents		
Amount used Daily amount per site Annual amount per site	: 24100 kg : 2410 tonnes		
Environment factors not influenced			
Flow rate	: 18,000 m3/day		
Other given operational conditions a Continuous use/release	ffecting environmental exposure		
Number of emission days per year	: 100		
<b>Emission or Release Factor: Air</b>	: 0.669 %		
Emission or Release Factor: Water	: 0.00154 %		
Emission or Release Factor: Soil	: 0%		
Remarks	: Indoor use, Used in closed system		
Technical conditions and measures / Organizational measures			
Air	: No air emission controls required; required removal efficiency is 0%.		
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.	ο	
Soil	: Soil emission controls are not applicable as there is no direct release to soil.	)	

Conditions and measures related to municipal sewage treatment plant

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	of sewage treatment		cipal sewage treatment plant m3/day	
Percentag water	e removed from waste	: 93.5 9	6	

2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Activity	: Extraction agents
Amount used Daily amount per site Annual amount per site	: 36712 kg : 13400 tonnes
Environment factors not influenced	
Flow rate	: 18,000 m3/day
Other given operational conditions a Continuous use/release	affecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 0.000706 %
Emission or Release Factor: Water	: 0.00529 %
Emission or Release Factor: Soil	
Remarks	: Indoor use, Used in closed system
Technical conditions and measures	
Air	<ul> <li>No air emission controls required; required removal efficiency is 0%.</li> </ul>
Water	<ul> <li>Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.</li> </ul>
Soil	: Soil emission controls are not applicable as there is no direct release to soil.
Conditions and measures related to	
	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	: 2,000 m3/day
Percentage removed from waste water	: 93.5 %

2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Activity

: Extraction agents

Amount used

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Daily amour Annual amo	nt per site unt per site		38460 kg 3846 tonnes	
Environment f Flow rate	actors not influenced		risk management 18,000 m3/day	
		affe	ecting environmental exposure	
Continuous Number of e vear	use/release emission days per	:	100	
Émission or	Release Factor: Air Release Factor:	-	0.114 % 0.095 %	
	Release Factor: Soil	-	0 % Indoor use, Used in closed system	
Technical con Air	ditions and measures		rganizational measures No air emission controls required; requirec efficiency is 0%.	l removal
Water		:	Ensure all waste water is collected and trea WWTP., Prevent discharge of undissolved	
Soil		:	or recover from wastewater. Soil emission controls are not applicable a direct release to soil.	s there is no
Conditions an	d measures related to	m	unicipal sewage treatment plant	
	vage Treatment Plant sewage treatment nt		Municipal sewage treatment plant 2,000 m3/day	
	removed from waste	:	93.5 %	

# 2.4 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure

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Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.5 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.6 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

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#### Technical conditions and measures

Handle substance within a predominantly closed system provided with extract ventilation. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.7 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

**Technical conditions and measures** 

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.8 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated

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#### differently).

: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.9 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC4	EUSES	Process	Fresh water		0.082 mg/L	0.153

ion 1	Revision Date	20.11.2012	Print Date 03.01.2	014	GB /
		solvent			
ERC4	EUSES	Process	Marine	0.0082 mg/L	0.04
		solvent	water	C C	
ERC4	EUSES	Process	Fresh water	0.149 mg/kg	0.15
		solvent	sediment	wet weight	
ERC4	EUSES	Process	Marine	0.015 mg/kg	0.04
		solvent	sediment	wet weight	
ERC4	EUSES	Process	Soil	0.126 mg/kg	0.24
		solvent		dry weight	
ERC4	EUSES	Process	Groundwate	0.060 mg/L	0.11
		solvent	r	_	
ERC4	EUSES	Process	Sewage	0.776 mg/L	0.03
		solvent	treatment		
			plant		
ERC4	EUSES	Extraction	Fresh water	11 µg/L	0.02
		medium - large			
		sites			
ERC4	EUSES	Extraction	Marine	1.03 µg/L	0.00
		medium - large	water		
		sites			
ERC4	EUSES	Extraction	Fresh water	0.020 mg/kg	0.02
		medium - large	sediment	wet weight	
		sites			
ERC4	EUSES	Extraction	Marine	0.002 mg/kg	0.00
		medium - large	sediment	wet weight	
		sites			
ERC4	EUSES	Extraction	Soil	7.46 µg/kg	0.24
		medium - large		wwt	
		sites			
ERC4	EUSES	Extraction	Groundwate	1.85 µg/L	0.00
		medium - large	r		
		sites			
ERC4	EUSES	Extraction	Sewage	64 µg/L	0.002
		medium - large	treatment		
EDC4		sites	plant	0.405	0.04
ERC4	EUSES	Extraction medium - small	Fresh water	0.185 mg/L	0.34
		sites			
ERC4	EUSES	Extraction	Marine	0.019	0.09
CR64	EUSES	medium - small	water	0.018 mg/L	0.09
		sites	Walti		
ERC4	EUSES	Extraction	Fresh water	0.334 mg/kg	0.34
LI\04	LUJEJ	medium - small	sediment	wet weight	0.34
		sites	Scument	wei weight	
ERC4	EUSES	Extraction	Marine	0.033 mg/kg	0.09
		medium - small	sediment	wet weight	0.00
		sites		not noight	
ERC4	EUSES	Extraction	Soil	0.211 mg/kg	0.41
		medium - small		dry weight	V.71
		sites			
ERC4	EUSES	Extraction	Groundwate	0.053 mg/L	0.09
		medium - small	r	Sives mg/L	0.00
		sites			
ERC4	EUSES	Extraction	Sewage	1.81 mg/L	0.07

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	mediun	n - small treatment		
	si	tes plant		

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	0.01 ppm	0.0001
PROC1	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC2	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC2	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.27 mg/kg/day	0.00006
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC4	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003
PROC10	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	25 ppm	0.25
PROC10	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	5.49 mg/kg/day	0.001
PROC15	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC15	ECETOC TRA v2.0 Worker		Chronic dermal	0.07 mg/kg/day	0.00001

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		systemic	1
		exposure	
			I

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

PROC1: Use in closed process, no likelihood of exposure

PROC10: Roller application or brushing

PROC15: Use as laboratory reagent

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Version 1	Revision Date 20.11.2012	Print Date 03.01.2014	GB / EN
1. Short title	of Exposure Scenario: Use	in Paints/ Coatings (industrial)	
Main User G		3: Industrial uses: Uses of substance	s as such or in

Sectors of end-use	preparations at industrial sites
Sectors of end-use	: SU11, SU18: Manufacture of rubber products, Manufacture of furniture
Environmental Release	: ERC4: Industrial use of processing aids in processes and
Categories Process categories	products, not becoming part of articles : PROC7: Industrial spraying
U	PROC10: Roller application or brushing
Activity	: Use in coatings (paints, adhesives, sealants), industrial

2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Activity	: Aerosols
Amount used Daily amount per site Annual amount per site	: 10720 kg : 1072 tonnes

Environment factors not influenced b Flow rate	oy risk management : 18,000 m3/day
Other given operational conditions a	ffecting environmental exposure
Continuous use/release	
Number of emission days per year	: 100
Emission or Release Factor: Air	• 0.05 %
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0%
Remarks	
Reillaiks	: Indoor use, Used in closed system
Technical conditions and measures /	Organizational measures
Water	: Ensure all waste water is collected and treated via a WWTP.
Soil	: Soil emission controls are not applicable as there is no direct release to soil.

Conditions and measures related to municipal sewage treatment plant Type of Sewage Treatment Plant Flow rate of sewage treatment : Municipal sewage treatment plant Flow rate of sewage treatment : 2,000 m3/day plant effluent Percentage removed from waste : 93.5 % water

2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

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Activity	:	Adhesives	
Amount used			
Daily amount pe Annual amount		6900 kg 2070 tonnes	
	rs not influenced by		
Flow rate	:	18,000 m3/day	
Other given operat		ecting environmental exposure	
Number of emiss year	sion days per :	300	
Emission or Rel		0.006 %	
Emission or Rele Water	ease Factor: :	0 %	
		0 %	
Remarks	:	Indoor use, Used in closed system	
Technical conditio	ns and measures / (	Organizational measures	
Water	:	Ensure all waste water is collected and treated WWTP.	via a
Soil	:	Soil emission controls are not applicable as the direct release to soil.	ere is no
		unicipal sewage treatment plant	
Flow rate of sew		Municipal sewage treatment plant 2,000 m3/day	
plant effluent Percentage remo water	oved from waste :	93.5 %	

#### 2.3 Contributing scenario controlling worker exposure for: PROC7: Industrial spraying

Activity Product characteristics	: Aerosols, Paint/coatings
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

**Technical conditions and measures** 

Carry out in a vented booth provided with laminar airflow. (Effectiveness (of a measure): 95 %)

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Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 2.4 Contributing scenario controlling worker exposure for: PROC7: Industrial spraying

Activity Product characteristics	: Aerosols, Mould release agents
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

**Technical conditions and measures** 

Carry out in a vented booth provided with laminar airflow. (Effectiveness (of a measure): 95 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.5 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Adhesives, sealants
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of

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#### occupational hygiene is implemented.

**Technical conditions and measures** 

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC4	EUSES	Aerosol	Fresh water		4.96 µg/L	0.0092
ERC4	EUSES	Aerosol	Marine water		0.40 µg/L	0.0021
ERC4	EUSES	Aerosol	Fresh water sediment		8.93 µg/kg wwt	0.0092
ERC4	EUSES	Aerosol	Marine sediment		0.72 μg/kg wwt	0.0021
ERC4	EUSES	Aerosol	Soil		0.045 mg/kg dry weight	0.087
ERC4	EUSES	Aerosol	Groundwate r		0.047 mg/L	0.087
ERC4	EUSES	Aerosol	Sewage treatment plant		1.06 µg/L	0.00004
ERC4	EUSES	Adhesives	Fresh water		4.85 µg/L	0.153
ERC4	EUSES	Adhesives	Marine water		0.39 µg/L	0.042
ERC4	EUSES	Adhesives	Fresh water sediment		8.74 µg/kg wwt	0.153
ERC4	EUSES	Adhesives	Marine sediment		0.702 µg/kg wwt	0.042
ERC4	EUSES	Adhesives	Soil		2.05	0.004
ERC4	EUSES	Adhesives	Groundwate r		2.15 µg/L	0.004
ERC4	EUSES	Adhesives	Sewage treatment plant		0 mg/L	0

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Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC7	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	25 ppm	0.25
PROC7	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	8.57 mg/kg/day	0.002
PROC7	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	25 ppm	0.25
PROC7	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	8.57 mg/kg/day	0.002
PROC10	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	25 ppm	0.25
PROC10	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	5.49 mg/kg/day	0.001

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

PROC10: Roller application or brushing PROC7: Industrial spraying

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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#### 1. Short title of Exposure Scenario: Use in cleaning agents

Main User Groups Sectors of end-use	<ul> <li>SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites</li> <li>SU5, SU7, SU12, SU13, SU17: Manufacture of textiles, leather, fur, Printing and reproduction of recorded media, Manufacture of plastics products, including compounding and conversion, Manufacture of other non-metallic mineral products, e.g. plasters, cement, General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment</li> </ul>
Environmental Release Categories	: ERC4, ERC7: Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of substances in closed systems
Process categories	<ul> <li>PROC0: Other Process or activity PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC7: Industrial spraying PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring</li> </ul>

2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Activity	:	Aerosols, Metal degreasers
Amount used Daily amount per site		50000 kg
		59000 kg 1180 tonnes
Annual amount per site	•	Tioutonnes
Environment factors not influenced	by	risk management
Flow rate	:	18,000 m3/day
Other given operational conditions a Continuous use/release	affe	ecting environmental exposure
Number of emission days per year	:	20
Emission or Release Factor: Air	:	0.3 %
Emission or Release Factor: Water	:	0.0001 %
Emission or Release Factor: Soil	:	0 %
Remarks	:	Indoor use, Used in closed system
Technical conditions and measures	/0	rganizational measures
Air	:	No air emission controls required; required removal efficiency is 0%.

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Water		Ensure all waste water is collected and t WWTP., Prevent discharge of undissolve or recover from wastewater.	
Soil		Soil emission controls are not applicable direct release to soil.	e as there is no
		unicipal sewage treatment plant	
Type of Sewage Flow rate of sev plant effluent		Municipal sewage treatment plant 2,000 m3/day	
	oved from waste	93.5 %	
		g environmental exposure for: ERC4: products, not becoming part of articles	
Activity		Paint strippers	
Amount used			
Daily amount pe Annual amount		140500 kg 2810 tonnes	
Environment facto	ors not influenced by	risk management 18,000 m3/day	
		•	
Other given opera Continuous use		ecting environmental exposure	
Number of emis		20	
Emission or Re Emission or Re Water		0.3 % 0.0001 %	
Emission or Re		0 %	
Remarks		Used in closed system	
Technical condition		rganizational measures No air emission controls required; requi efficiency is 0%.	red removal
Water		Ensure all waste water is collected and t WWTP., Prevent discharge of undissolve	
Soil		or recover from wastewater. Soil emission controls are not applicable direct release to soil.	e as there is no
		unicipal sewage treatment plant	
Type of Sewage Flow rate of sev plant effluent		Municipal sewage treatment plant 2,000 m3/day	
	oved from waste	93.5 %	

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plant effluent

water

Percentage removed from waste : 93.5 %

) kg tonnes anagement 0 m3/day environmental exposure
tonnes anagement 0 m3/day environmental exposure
anagement 0 m3/day environmental exposure
0 m3/day environmental exposure
0 m3/day environmental exposure
_
6
%
%
in closed system
ational measures
r emission controls required; required removal ency is 0%.
re all waste water is collected and treated via a P., Prevent discharge of undissolved substance to
over from wastewater. mission controls are not applicable as there is no
release to soil.

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2.4 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Activity	: Industrial surface cleaning, metal cleaning (vapour degreasing)
Product characteristics	
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).

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: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

## 2.5 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

gloves (tested to EN374) if hand contact with substance likely. Clean up contamina soon as they occur. Wash off any skin contamination immediately. Provide basic e training to prevent / minimise exposures and to report any skin problems that may	tributing scenario controlli (synthesis or formulation)	C3: Use in closed batch				
in Mixture/Articleto 100 % (unless stated differently).Physical Form (at time of use): Liquid, vapour pressure > 10 kPaFrequency and duration of use Remarks: Covers daily exposures up to 8 hours (unless differently).: , Assumes use at not more than 20°C above temperature., Assumes a good basic standar occupational hygiene is implemented.Technical conditions and measures Handle substance within a predominantly closed system provided with extract ven (Effectiveness (of a measure): 90 %)Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contagioves (tested to EN374) if hand contact with substance likely. Clean up contamina soon as they occur. Wash off any skin contamination immediately. Provide basic e	Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)					
in Mixture/Articleto 100 % (unless stated differently).Physical Form (at time of use): Liquid, vapour pressure > 10 kPaFrequency and duration of use Remarks: Covers daily exposures up to 8 hours (unless differently).: , Assumes use at not more than 20°C above temperature., Assumes a good basic standar 	Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.					
in Mixture/Article       to 100 % (unless stated differently).         Physical Form (at time of use)       : Liquid, vapour pressure > 10 kPa         Frequency and duration of use       : Covers daily exposures up to 8 hours (unless differently).         : Assumes use at not more than 20°C above temperature., Assumes a good basic standard	substance within a predomin	ith extract ventilation.				
in Mixture/Articleto 100 % (unless stated differently).Physical Form (at time of use): Liquid, vapour pressure > 10 kPaFrequency and duration of use Remarks: Covers daily exposures up to 8 hours (unless	:	l basic standard of				
in Mixture/Article to 100 % (unless stated differently).	-	8 hours (unless stated				
Activity : Raw leather cleaning Product characteristics	characteristics Intration of the Substance : ture/Article	ntly).				

Activity Product characteristics : Cleaning agent

		•		
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in Mixture/	tion of the Substance /Article orm (at time of use)	to 100	the percentage of the substance % (unless stated differently). vapour pressure > 10 kPa	in the product up
Frequency a Remarks	nd duration of use	: Covers differe	s daily exposures up to 8 hours (u ntly).	nless stated
		temper	mes use at not more than 20°C ab ature., Assumes a good basic sta ational hygiene is implemented.	
Handle sub	nditions and measures stance within a predon ess (of a measure): 90 °	ninantly clo	esed system provided with extract	ventilation.
Avoid direct gloves (test soon as the	t skin contact with pro ted to EN374) if hand c y occur. Wash off any	duct. Ident ontact with skin conta	ases, dispersion and exposure ify potential areas for indirect skin substance likely. Clean up contar mination immediately. Provide bas to report any skin problems that	mination/spills as sic employee
Wear suital	ble gloves tested to EN	374. (Effect	protection, hygiene and health eva viveness (of a measure): 80 %) er exposure for: PROC4: Use i ity for exposure arises	
Activity		: Cleani	ng agent	
Product char Concentra in Mixture/	tion of the Substance	: Covers to 100	s the percentage of the substance % (unless stated differently). vapour pressure > 10 kPa	in the product up
Frequency a Remarks	nd duration of use	: Covers differe	s daily exposures up to 8 hours (u ntly).	nless stated
		temper	mes use at not more than 20°C ab rature., Assumes a good basic sta ational hygiene is implemented.	
	nditions and measures raction ventilation at p		e emissions occur. (Effectiveness	(of a measure): 90
			ases, dispersion and exposure fy potential areas for indirect skin	i contact. Wear

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

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#### 2.8 Contributing scenario controlling worker exposure for: PROC7: Industrial spraying

Activity Product characteristics	: Paint strippers
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

# 2.9 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Manual use as cleaning agent
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

**Technical conditions and measures** 

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear

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gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.10 Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Activity Product characteristics	: Paint stripping / Metal cleaning
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.11 Contributing scenario controlling worker exposure for: PROC13: Treatment of articles by dipping and pouring

Activity Product characteristics	: Paint stripping / Metal cleaning
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid carrying out operation for more than 1 hour., Avoid direct skin contact with product.

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Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC4	EUSES	Metal degreasers	Fresh water		6.40 µg/L	0.012
ERC4	EUSES	Metal degreasers	Marine water		0.544 µg/L	0.0028
ERC4	EUSES	Metal degreasers	Fresh water sediment		12 µg/kg wwt	0.012
ERC4	EUSES	Metal degreasers	Marine sediment		0.980 µg/kg wwt	0.0028
ERC4	EUSES	Metal degreasers	Soil		2.81 µg/kg wwt	0.00546
ERC4	EUSES	Metal degreasers	Groundwate r		1.51 µg/L	0.00278
ERC4	EUSES	Metal degreasers	Sewage treatment plant		16 µg/L	0.00062
ERC4	EUSES	Paint strippers	Fresh water		6.42 µg/L	0.012
ERC4	EUSES	Paint strippers	Marine water		0.564 µg/L	0.0028
ERC4	EUSES	Paint strippers	Fresh water sediment		12 µg/kg wwt	0.012
ERC4	EUSES	Paint strippers	Marine sediment		0.983 µg/kg wwt	0.0028
ERC4	EUSES	Paint strippers	Soil		2.85 µg/kg wwt	0.00553
ERC4	EUSES	Paint strippers	Groundwate r		1.52 µg/L	0.00281
ERC4	EUSES	Paint strippers	Sewage treatment plant		16 µg/L	0.00062
ERC7	EUSES		Fresh water		6.52 µg/L	0.012
ERC7	EUSES		Marine water		0.556 µg/L	0.0029
ERC7	EUSES		Fresh water sediment		12.1 μg/kg wwt	0.012
ERC7	EUSES		Marine sediment		1.00 μg/kg wwt	0.0029
ERC7	EUSES		Soil		1.86 µg/kg	0.00361

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ERC7	EUSES	Groundwate r	0.396 µg/L	0.00733
ERC7	EUSES	Sewage treatment plant	17 µg/L	0.00066

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC2	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC2	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	1.37 mg/kg/day	0.00006
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.34 mg/kg/day	0.00001
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.34 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	10 ppm	0.1
PROC4	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003
PROC7	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC7	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	42.86 mg/kg/day	0.002
PROC10	ECETOC TRA v2.0 Worker		Chronic inhalation	25 ppm	0.25

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		systemic exposure			
PROC10	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	27.43 mg/kg/day	0.001	
PROC13	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	25 ppm	0.25	
PROC13	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	13.71 mg/kg/day	0.0006	
PROC10	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	50 ppm	0.5	
PROC10	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	13.71 mg/kg/day	0.0006	

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

ERC7: Industrial use of substances in closed systems

PROC10: Roller application or brushing

PROC13: Treatment of articles by dipping and pouring

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC7: Industrial spraying

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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#### 1. Short title of Exposure Scenario: Use of blowing agents in manufacture of foam

Main User Groups	: SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	: SU 3: Industrial Manufacturing (all)
Environmental Release Categories	: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles
Process categories	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure</li> </ul>
	PROC3: Use in closed batch process (synthesis or formulation)
	PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises
	PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC12: Use of blowing agents in manufacture of foam

# 2.1 Contributing scenario controlling environmental exposure for: ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

Amount used Daily amount per site Annual amount per site	: 3183 kg : 955 tonnes
Environment factors not influenced	by risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a Continuous use/release	affecting environmental exposure
Number of emission days per year	: 300
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	
Emission or Release Factor: Soil	: 0%
Remarks	: Used in closed system
Technical conditions and measures	-
Air	: No air emission controls required; required removal efficiency is 0%.
Water	<ul> <li>Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.</li> </ul>
Soil	: No soil emission controls required.

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Type of Sewa	age Treatment Plant	: Munici	sewage treatment plant	
Flow rate of s	sewage treatment t	: 2,000 n	n3/day	
Percentage r water	emoved from waste	: 93.5 %		

# 2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Activity Product characteristics	: Surface treatment
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.3 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Activity Product characteristics	: Surface treatment
Concentration of the Substance	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

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Technical conditions and measures Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.4 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Activity Product characteristics	: Cleaning
Concentration of the Substance	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.5 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Activity Product characteristics	: Cleaning agent
Product characteristics Concentration of the Substance	: Covers the percentage of the substance in the product up
in Mixture/Article	to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa

Frequency and duration of use

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Remarks		vers daily exposures up to 8 hours (unle ferently).	ess stated
	ten	ssumes use at not more than 20°C abov nperature., Assumes a good basic stand cupational hygiene is implemented.	
Avoid direct skin gloves (tested to soon as they occ	contact with product. Ic EN374) if hand contact cur. Wash off any skin co	releases, dispersion and exposure lentify potential areas for indirect skin c with substance likely. Clean up contami entamination immediately. Provide basic and to report any skin problems that ma	nation/spills as employee
		nal protection, hygiene and health evalu ffectiveness (of a measure): 80 %)	ation
•	eparation (charging/ di	vorker exposure for: PROC8b: Trans scharging) from/ to vessels/ large co	
Activity	: Cle	eaning agent	
Product character	istics f the Substance : Co	vers the percentage of the substance in 25 %.	the product up
Physical Form (	at time of use) : Lio	uid, vapour pressure > 10 kPa	
Frequency and du Remarks	: Co	vers daily exposures up to 8 hours (unle ferently).	ess stated
	ten	ssumes use at not more than 20°C abov nperature., Assumes a good basic stand cupational hygiene is implemented.	
Avoid direct skin gloves (tested to soon as they occ	contact with product. Ic EN374) if hand contact cur. Wash off any skin co	releases, dispersion and exposure lentify potential areas for indirect skin c with substance likely. Clean up contami ontamination immediately. Provide basic and to report any skin problems that ma	nation/spills as employee
		nal protection, hygiene and health evalu ffectiveness (of a measure): 80 %)	ation
		vorker exposure for: PROC9: Transfe edicated filling line, including weigh	
Activity Product character		eaning agent	
Concentration o in Mixture/Articl	f the Substance : Co e to :	vers the percentage of the substance in 25 %.	the product up

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Frequency a Remarks		ers daily exposures up to 8 hours (u erently).	nless stated
	tem	sumes use at not more than 20°C ab perature., Assumes a good basic sta upational hygiene is implemented.	
	enditions and measures traction ventilation at points wh	ere emissions occur. (Effectiveness	o (of a measure): 90
Limit the su Identify pot with substa contaminat	ubstance content in the product tential areas for indirect skin co ance likely. Clean up contamina	eleases, dispersion and exposure t to 25 %., Avoid direct skin contact ntact. Wear gloves (tested to EN374 tion/spills as soon as they occur. W employee training to prevent / minin develop.	4) if hand contact ash off any skin
		al protection, hygiene and health eve ectiveness (of a measure): 80 %)	aluation
	uting scenario controlling wo nanufacture of foam	orker exposure for: PROC12: Use	of blowing
Activity Broduct char		ning agent	

Activity	: Cleaning agent
Product characteristics	
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

occupational hygiene is implemented.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

#### Environment

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Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC4	EUSES		Fresh water		15 µg/L	0.028
ERC4	EUSES		Marine water		1.42 µg/L	0.0073
ERC4	EUSES		Fresh water sediment		27 µg/kg wwt	0.028
ERC4	EUSES		Marine sediment		2.56 µg/kg wwt	0.0073
ERC4	EUSES		Soil		0.048 mg/kg dry weight	0.093
ERC4	EUSES		Groundwate r		0.040 mg/L	0.748
ERC4	EUSES		Sewage treatment plant		0.103 µg/L	0.00398

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	0.01 ppm	0.0001
PROC1	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.04 mg/kg/day	0.00001
PROC2	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	30 ppm	0.3
PROC2	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.16 mg/kg/day	0.00003
PROC3	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	60 ppm	0.6
PROC3	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.04 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	60 ppm	0.6
PROC4	ECETOC TRA v2.0 Worker		Chronic dermal	0.82 mg/kg/day	0.0002

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		systemic exposure		
PROC8b	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	90 ppm	0.9
PROC8b	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.82 mg/kg/day	0.0002
PROC9	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	12 ppm	0.12
PROC9	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.82 mg/kg/day	0.0002
PROC12	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	60 ppm	0.6
PROC12	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.04 mg/kg/day	0.00001

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

PROC1: Use in closed process, no likelihood of exposure

PROC12: Use of blowing agents in manufacture of foam

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC3: Use in closed batch process (synthesis or formulation)

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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 GB / EN

#### 1. Short title of Exposure Scenario: Use in/as functional fluids (industrial)

Main User Groups	: SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Sectors of end-use	: SU 3: Industrial Manufacturing (all)
Environmental Release Categories	: ERC7: Industrial use of substances in closed systems
Process categories	<ul> <li>PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</li> </ul>

# 2.1 Contributing scenario controlling environmental exposure for: ERC7: Industrial use of substances in closed systems

Activity	: Aerosols
Amount used	
Daily amount per site	: 500 kg
Annual amount per site	: 10 tonnes
Environment factors not influenced	
Flow rate	: 18,000 m3/day
Other given operational conditions a Continuous use/release	fecting environmental exposure
Number of emission days per year	: 20
Emission or Release Factor: Air	: 0.01 %
Emission or Release Factor: Water	: 0.001 %
Emission or Release Factor: Soil	: 0.001 %
Remarks	: Used in closed system
Technical conditions and measures	Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: No soil emission controls required.
Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment	nunicipal sewage treatment plant : Municipal sewage treatment plant : 2,000 m3/day
plant effluent	: 93.5 %

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water

# 2.2 Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Activity Product characteristics	: Surface treatment
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.3 Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Activity Product characteristics	: Surface treatment
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Handle substance within a closed system.

Organisational measures to prevent /limit releases, dispersion and exposure

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Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.4 Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Activity Product characteristics	: Cleaning
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Frequency and duration of use	<ul> <li>Covers daily exposures up to 8 hours (unless stated differently).</li> <li>Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of</li> </ul>

**Technical conditions and measures** 

Handle substance within a predominantly closed system provided with extract ventilation. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.5 Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Activity Product characteristics	: Cleaning agent
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	:,Assumes use at not more than 20°C above ambient

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temperature., Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC7	EUSES		Fresh water		6.52 µg/L	0.012
ERC7	EUSES		Marine water		0.556 µg/L	0.0029
ERC7	EUSES		Fresh water sediment		12.1 µg/kg wwt	0.012
ERC7	EUSES		Marine sediment		1.00 µg/kg wwt	0.0029
ERC7	EUSES		Soil		1.86 µg/kg wwt	0.00361
ERC7	EUSES		Groundwate r		0.396 µg/L	0.00733
ERC7	EUSES		Sewage treatment plant		17 µg/L	0.00066

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC1	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	0.01 ppm	0.0001
PROC1	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC2	ECETOC TRA		Chronic	50 ppm	0.5

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	v2.0 Worker	inhalation systemic exposure		
PROC2	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.27 mg/kg/day	0.00006
PROC3	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	10 ppm	0.1
PROC3	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001
PROC4	ECETOC TRA v2.0 Worker	Chronic inhalation systemic exposure	10 ppm	0.1
PROC4	ECETOC TRA v2.0 Worker	Chronic dermal systemic exposure	1.37 mg/kg/day	0.0003

ERC7: Industrial use of substances in closed systems PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Version 1	Revision Date 20.11.2012	Print Date 03.01.2014	GB / EN
1. Short title	e of Exposure Scenario: Use i	n Paints/Coatings	
	•	Ŭ	

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental Release	: ERC8a, ERC8d: Wide dispersive indoor use of processing
Categories	aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Process categories	: PROC10: Roller application or brushing PROC11: Non industrial spraying

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Activity	: Aerosols
Amount used	
Daily amount per site	: 6.14 kg
Annual amount per site	: 2.24 tonnes
Environment factors not influenced	by risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a Dispersive use	affecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0.01 %
Technical conditions and measures	
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: No soil emission controls required.
Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment plant effluent	
Percentage removed from waste water	: 93.5 %

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2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Activity	: Adhesives
Amount used Daily amount per site Annual amount per site	: 11.4 kg : 4.14 tonnes
Environment factors not influenced	by risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a Dispersive use	affecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0.01 %
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: No soil emission controls required.
Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment plant effluent	<ul> <li>Municipal sewage treatment plant</li> <li>2,000 m3/day</li> </ul>
Percentage removed from waste water	: 93.3 %

2.3 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Paint/coatings, Indoor
Concentration of the Substance in Mixture/Article	: Limit the substance content in the mixture to 50 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting workers exposure

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Outdoor / In		-	Indoor , Assumes use at not more than 20°C above an temperature., Assumes a good basic standard occupational hygiene is implemented.	

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 90 %)

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.4 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Paint/coatings, Outdoor</li> <li>Limit the substance content in the mixture to 50 %.</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecti Outdoor / Indoor	ing workers exposure : Outdoor : , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Provide a good standard of genera (Effectiveness (of a measure): 30 9	al or controlled ventilation (5 to 15 air changes per hour).
	t /limit releases, dispersion and exposure utdoors., Avoid carrying out operation for more than 1 hour.
	o personal protection, hygiene and health evaluation 374. (Effectiveness (of a measure): 80 %)

# 2.5 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Adhesives, sealants, Indoor
Concentration of the Substance	: Limit the substance content in the mixture to 50 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated

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		differen	tly).	
Other operation Outdoor / Inde	al conditions affectir oor	: Indoor : , Assum tempera	exposure es use at not more than 20°C ture., Assumes a good basic ional hygiene is implemented	standard of
	tions and measures tion ventilation at po	oints where	emissions occur. (Effectiven	ess (of a measure): 80
			otection, hygiene and health veness (of a measure): 80 %)	evaluation
2.6 Contributir spraying	ng scenario control	lling worke	er exposure for: PROC11: N	lon industrial
Activity		: Paint/co	atings, Aerosols, Indoor	
Product charact Concentration in Mixture/Art	n of the Substance	: Limit the	e substance content in the mi	ixture to 50 %.
Physical Forn	n (at time of use)	: Liquid, v	/apour pressure > 10 kPa	
Frequency and Remarks	duration of use	: Covers different	daily exposures up to 8 hours tly).	s (unless stated
	al conditions affectir		exposure	
Outdoor / Inde	oor	tempera	es use at not more than 20°C ture., Assumes a good basic ional hygiene is implemented	standard of
	tions and measures tion ventilation at po	oints where	emissions occur. (Effectiven	ess (of a measure): 80
	neasures to prevent out operation for m		ses, dispersion and exposure nours.	
			rotection, hygiene and health veness (of a measure): 80 %)	evaluation
2.7 Contributir spraying	ng scenario control	lling worke	er exposure for: PROC11: N	Non industrial
Activity Product charact	eristics	: Paint/co	atings, Aerosols, Outdoor	
	n of the Substance	: Limit the	e substance content in the mi	ixture to 50 %.
	n (at time of use)	: Liquid, v	/apour pressure > 10 kPa	
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Frequency and Remarks	d duration of use :	Covers daily exposures up to 8 hours (unless s differently).	tated
Other operatic Outdoor / In		workers exposure Outdoor , Assumes use at not more than 20°C above am temperature., Assumes a good basic standard o occupational hygiene is implemented.	
Provide a go	ditions and measures ood standard of general or ss (of a measure): 30 %)	r controlled ventilation (5 to 15 air changes per h	iour).

Organisational measures to prevent /limit releases, dispersion and exposure Ensure operation is undertaken outdoors.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

#### 3. Exposure estimation and reference to its source

Environment	
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Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		12 µg/L	0.022
ERC8a	EUSES		Marine water		1.15 µg/L	0.00593
ERC8a	EUSES		Fresh water sediment		22 µg/kg wwt	0.022
ERC8a	EUSES		Marine sediment		2.06 µg/kg wwt	0.00593
ERC8a	EUSES		Soil		8.40 μg/kg wwt	0.016
ERC8a	EUSES		Groundwate r		1.74 µg/L	0.00322
ERC8a	EUSES		Sewage treatment plant		76 µg/L	0.00293
ERC8a	EUSES		Fresh water		19 µg/L	0.035
ERC8a	EUSES		Marine water		1.85 µg/L	0.00954
ERC8a	EUSES		Fresh water sediment		35 µg/kg wwt	0.035
ERC8a	EUSES		Marine sediment		3.33 µg/kg wwt	0.00954

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ERC8a ERC8a	EUSES EUSES	Soil Groundwate	16 μg/kg wwt 3.35 μg/L	0.00563 0.00619
ERC8a	EUSES	r Sewage treatment plant	0.146 mg/L	0.00564

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	50 ppm	0.5
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	2.74 mg/kg/day	0.001
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	2.74 mg/kg/day	0.001
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	50 ppm	0.5
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	2.74 mg/kg/day	0.001
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	60 ppm	0.6
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	10.71 mg/kg/day	0.002
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	10.71 mg/kg/day	0.002

ERC8a: Wide dispersive indoor use of processing aids in open systems

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ERC8d: Wide dispersive outdoor use of processing aids in open systems PROC10: Roller application or brushing PROC11: Non industrial spraying

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

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1. Short title of Exposure Scenario: Use in cleaning agents				

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental Release	: ERC8a, ERC8d: Wide dispersive indoor use of processing
Categories	aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Process categories	: PROC10: Roller application or brushing
	PROC11: Non industrial spraying
	PROC13: Treatment of articles by dipping and pouring

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Activity	: Metal degreasers
Amount used Daily amount per site Annual amount per site	: 6.47 kg : 2.36 tonnes
Environment factors not influenced Flow rate	by risk management : 18,000 m3/day
Other given operational conditions a Dispersive use	affecting environmental exposure
Number of emission days per vear	: 365
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0.01 %
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	<ul> <li>Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.</li> </ul>
Soil	: No soil emission controls required.
Conditions and measures related to	municipal sewage treatment plant
	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	
Percentage removed from waste water	: 93.5 %

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2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Activity	: Paint strippers
Amount used Daily amount per site Annual amount per site	: 15.4 kg : 5.62 tonnes
Environment factors not influenced	by risk management
Flow rate	: 18,000 m3/day
Other given operational conditions a Dispersive use	affecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0.01 %
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	<ul> <li>Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.</li> </ul>
Soil	: No soil emission controls required.
Conditions and measures related to	municipal sewage treatment plant
Type of Sewage Treatment Plant	
Flow rate of sewage treatment plant effluent	: 2,000 m3/day
Percentage removed from waste water	: 93.5 %

# 2.3 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Cleaning agent, Indoor
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated
	differently).

Version 1	Revision Date 20.11.2012	Print Date 03.01.2014	GB / EN
Other operat Outdoor /	: , Ass temp	•	
Avoid dired gloves (tes soon as the	ted to EN374) if hand contact wite occur. Wash off any skin cont	eases, dispersion and exposure tify potential areas for indirect skin h substance likely. Clean up contar amination immediately. Provide bas d to report any skin problems that i	mination/spills as sic employee
Wear suita	ble gloves tested to EN374. (Effe	l protection, hygiene and health eva ctiveness (of a measure): 80 %) n Type A filter or better. (Effectivene	

90 %)

2.4 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Activity Product characteristics	: Cleaning agent, Outdoor
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	: Outdoor
	<ul> <li>Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.</li> </ul>

Organisational measures to prevent /limit releases, dispersion and exposure Ensure operation is undertaken outdoors., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

2.5 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

Version 1	Revision Date 20.11.2	2012	Print Date 03.01.2014	GB / EN
in Mixture/ Physical Fo	ion of the Substance	: Cover to 100 : Liquio	stripper & graffiti remover, Indoor s the percentage of the substance % (unless stated differently). d, vapour pressure > 10 kPa s daily exposures up to 8 hours (un	
Relliarks		differ		liess stated
Other operati Outdoor / I	onal conditions affecti ndoor	: Indoo : , Assu tempe	-	
Avoid direct gloves (test soon as the	t skin contact with pro ed to EN374) if hand co y occur. Wash off any	duct. Iden ontact wit skin conta	eases, dispersion and exposure tify potential areas for indirect skin h substance likely. Clean up contar amination immediately. Provide bas d to report any skin problems that r	nination/spills as sic employee
Wear suitab Wear a resp 90 %) 2.6 Contribu	le gloves tested to EN irator conforming to E	374. (Effeo N140 with	protection, hygiene and health eva ctiveness (of a measure): 80 %) Type A filter or better. (Effectivene ker exposure for: PROC10: Roll	ess (of a measure):
brushing Activity		· Paint	stripper & graffiti remover, Outdoo	r
Product chara Concentrat in Mixture/	ion of the Substance	: Cover to 100	stripper a grann remover, outdoor s the percentage of the substance % (unless stated differently). I, vapour pressure > 10 kPa	
Frequency ar Remarks	nd duration of use	: Cover differe	rs daily exposures up to 8 hours (ur ently).	nless stated
Other operati Outdoor / I	onal conditions affecti ndoor	: Outdo : , Assu tempe	•	
Ensure oper potential arc substance l contaminati	ration is undertaken ou eas for indirect skin co ikely. Clean up contam	utdoors., A Intact. We Ination/sp de basic e	eases, dispersion and exposure Avoid direct skin contact with produ ear gloves (tested to EN374) if hand bills as soon as they occur. Wash o mployee training to prevent / minin evelop.	contact with ff any skin

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Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

# 2.7 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity Product characteristics	: Paint stripper & graffiti remover, Indoor
Concentration of the Substance	: Covers the percentage of the substance in the product up
in Mixture/Article	to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecti Outdoor / Indoor	ng workers exposure : Indoor
	: , Assumes use at not more than 20°C above ambient
	temperature., Assumes a good basic standard of occupational hygiene is implemented.
Avoid direct skin contact with pro gloves (tested to EN374) if hand c soon as they occur. Wash off any	t /limit releases, dispersion and exposure duct. Identify potential areas for indirect skin contact. Wear ontact with substance likely. Clean up contamination/spills as skin contamination immediately. Provide basic employee osures and to report any skin problems that may develop.
	o personal protection, hygiene and health evaluation 374. (Effectiveness (of a measure): 80 %)
	ning to EN140 with Type A filter or better. (Effectiveness (of a
2.8 Contributing scenario contro spraying	olling worker exposure for: PROC11: Non industrial
Activity Product characteristics	: Paint stripper & graffiti remover, Outdoor

Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting workers exposure

and to report any skin problems that may develop.

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Outdoor /	:, As tem	door ssumes use at not more than 20°C abo perature., Assumes a good basic star upational hygiene is implemented.	
Ensure ope potential a substance	eration is undertaken outdoors reas for indirect skin contact. I likely. Clean up contamination	eleases, dispersion and exposure ., Avoid direct skin contact with produ Wear gloves (tested to EN374) if hand /spills as soon as they occur. Wash o : employee training to prevent / minim	contact with ff any skin

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a full face respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 95 %)

2.9 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity Product characteristics	: Degreasing agent, Aerosols, Indoor
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	<ul> <li>Indoor</li> <li>, Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.</li> </ul>

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a full face respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 95 %)

2.10 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

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Version 1 Revision	Date 20.11.2012	Print Date 03.01.2014	GB / EN
Activity Product characteristics Concentration of the S in Mixture/Article Physical Form (at time	Substance : Covers to 100	asing agent, Aerosols, Outdoor s the percentage of the substance % (unless stated differently). , vapour pressure > 10 kPa	e in the product up
Frequency and duration Remarks		s daily exposures up to 8 hours ( ntly).	unless stated
Other operational condit Outdoor / Indoor	: Outdo : , Assu tempe		bove ambient andard of
Ensure operation is un potential areas for indin substance likely. Clean	dertaken outdoors., A rect skin contact. We up contamination/sp ately. Provide basic er	ases, dispersion and exposure void direct skin contact with prod ar gloves (tested to EN374) if han ills as soon as they occur. Wash nployee training to prevent / mini velop.	d contact with off any skin
Wear suitable gloves te	ested to EN374. (Effect	protection, hygiene and health ev tiveness (of a measure): 80 %) 140 with Type A filter or better. (E	
2.11 Contributing scer spraying, Option 1	nario controlling wo	rker exposure for: PROC11,: N	lon industrial
Activity Product characteristics Concentration of the S in Mixture/Article Physical Form (at time	to 100	strippers s the percentage of the substance % (unless stated differently). , vapour pressure > 10 kPa	e in the product up
Frequency and duration Remarks	: Covers differe : , Assu tempe	s daily exposures up to 8 hours ( ntly). mes use at not more than 20°C al rature., Assumes a good basic st ational hygiene is implemented.	bove ambient

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 80 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee

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training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.12 Contributing scenario controlling worker exposure for: PROC11,: Non industrial spraying, Option 2

Activity Product characteristics	: Paint strippers
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Organizational managements to prove	Wimit releases, dispersion and experience

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

#### 3. Exposure estimation and reference to its source

#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES	Metal degreasers	Fresh water		13 µg/L	0.024
ERC8a	EUSES	Metal degreasers	Marine water		1.19 µg/L	0.00613
ERC8a	EUSES	Metal degreasers	Fresh water sediment		23 µg/kg wwt	0.024
ERC8a	EUSES	Metal degreasers	Marine sediment		2.14 µg/kg wwt	0.00613
ERC8a	EUSES	Metal degreasers	Soil		8.86 µg/kg wwt	0.017
ERC8a	EUSES	Metal	Groundwate		1.84 µg/L	0.00341

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		degreasers	r			
ERC8a	EUSES	Metal degreasers	Sewage treatment plant		80 µg/L	0.00308
ERC8a	EUSES	Paint strippers	Fresh water		24 µg/L	0.044
ERC8a	EUSES	Paint strippers	Marine water		2.30 µg/L	0.012
ERC8a	EUSES	Paint strippers	Fresh water sediment		43 µg/kg wwt	0.044
ERC8a	EUSES	Paint strippers	Marine sediment		4.14 μg/kg wwt	0.012
ERC8a	EUSES	Paint strippers	Soil		21 µg/kg wwt	0.041
ERC8a	EUSES	Paint strippers	Groundwate r		4.37 µg/L	0.00809
ERC8a	EUSES	Paint strippers	Sewage treatment plant		191 µg/L	0.00737

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	30 ppm	0.3
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	5.49 mg/kg/day	0.001
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	5.49 mg/kg/day	0.001
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	50 ppm	0.5
PROC10	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	5.49 mg/kg/day	0.001
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC10	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic	5.49 mg/kg/day	0.001

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			exposure		
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	50 ppm	0.5
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	21.43 mg/kg/day	0.00
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	21.43 mg/kg/day	0.00
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	50 ppm	0.5
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	21.43 mg/kg/day	0.00
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	35 ppm	0.35
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	21.43 mg/kg/day	0.00
PROC13	ECETOC TRA v2.0 Worker	Option 1	Chronic inhalation systemic exposure	50 ppm	0.5
PROC13	ECETOC TRA v2.0 Worker	Option 1	Chronic dermal systemic exposure	2.74 mg/kg/day	0.00
PROC13	ECETOC TRA v2.0 Worker	Option 2	Chronic inhalation systemic exposure	25 ppm	0.25
PROC13	ECETOC TRA v2.0 Worker	Option 2	Chronic dermal systemic exposure	2.74 mg/kg/day	0.00

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems PROC10: Roller application or brushing PROC11: Non industrial spraying PROC13: Treatment of articles by dipping and pouring

Version 1

Revision Date 20.11.2012

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GB / EN

Version 1	Revision Date 20.11.2	2012	Print Date 03.01.2014	GB / EN
1. Short title o	of Exposure Scenar	io:	Use in cosmetics	
Main User Gr	oups		SU 22: Professional uses: Public domain (adn education, entertainment, services, craftsmen	
Sectors of en	nd-use	:	SU 22: Professional uses: Public domain (adn education, entertainment, services, craftsmen	ninistration,
Environment Categories	al Release		ERC8a, ERC8d: Wide dispersive indoor use of aids in open systems, Wide dispersive outdoo processing aids in open systems	
dispersive ind		sing	g environmental exposure for: ERC8a, ER J aids in open systems, Wide dispersive of	
Activity		:	Aerosols	
Amount used				
			6.14 kg	
Daily amount			•	
			2.24 tonnes	
Daily amount Annual amou	int per site	:	2.24 tonnes	
Daily amount Annual amou		: by i	2.24 tonnes	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us	int per site octors not influenced erational conditions a	: by i :	2.24 tonnes risk management	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us	int per site ctors not influenced erational conditions a	: by i : affe	2.24 tonnes risk management 18,000 m3/day	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or	int per site octors not influenced erational conditions a se nission days per Release Factor: Air	by i : affe :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 %	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water	int per site ectors not influenced erational conditions a se nission days per Release Factor: Air Release Factor:	: by i : affe : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 %	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water	int per site octors not influenced erational conditions a se nission days per Release Factor: Air	: by i : affe : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 %	
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I	int per site ectors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Release Factor: Soil	: by ı : affe : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures	emoval
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I	int per site ectors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Release Factor: Soil	: by ı : affe : : : : : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 %	emoval
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I	int per site ectors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Release Factor: Soil	: by ı : : : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures No air emission controls required; required re efficiency is 0%. Ensure all waste water is collected and treated WWTP., Prevent discharge of undissolved sul	d via a
Daily amound Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I Fechnical cond Air	int per site ectors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Release Factor: Soil	: by ı : affe : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures No air emission controls required; required re efficiency is 0%. Ensure all waste water is collected and treated	d via a
Daily amound Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I Technical cond Air Water Soil	int per site actors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Soil litions and measures	: by I : affe : : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures No air emission controls required; required re efficiency is 0%. Ensure all waste water is collected and treated WWTP., Prevent discharge of undissolved sul or recover from wastewater.	d via a
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I Technical cond Air Water Soil Conditions and Type of Sewa	int per site ectors not influenced erational conditions a se mission days per Release Factor: Air Release Factor: Soil litions and measures	: by 1 : affe : : : : : : : : : : : : : : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures No air emission controls required; required re efficiency is 0%. Ensure all waste water is collected and treated WWTP., Prevent discharge of undissolved sul or recover from wastewater. No soil emission controls required. nicipal sewage treatment plant Municipal sewage treatment plant	d via a
Daily amount Annual amou Environment fa Flow rate Other given ope Dispersive us Number of er year Emission or I Emission or I Water Emission or I Technical cond Air Water Soil Conditions and Type of Sewa	Int per site Int p	: by 1 : affe : : : : : : : : : : : : : : : : : :	2.24 tonnes risk management 18,000 m3/day cting environmental exposure 365 1 % 1 % 0.01 % rganizational measures No air emission controls required; required re efficiency is 0%. Ensure all waste water is collected and treated WWTP., Prevent discharge of undissolved sul or recover from wastewater. No soil emission controls required. nicipal sewage treatment plant	d via a

3. Exposure estimation and reference to its source

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#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		12 µg/L	0.022
ERC8a	EUSES		Marine water		1.15 µg/L	0.00593
ERC8a	EUSES		Fresh water sediment		22 µg/kg wwt	0.022
ERC8a	EUSES		Marine sediment		2.06 µg/kg wwt	0.00593
ERC8a	EUSES		Soil		8.40 μg/kg wwt	0.016
ERC8a	EUSES		Groundwate r		1.74 µg/L	0.00322
ERC8a	EUSES		Sewage treatment plant		76 µg/L	0.00293

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems

Version 1 Re	evision Date 20.11.2012	Print Date 03.01.2014	GB / EN
1. Short title of Ex	posure Scenario: Use i	n agrochemicals (professional)	
Main User Group		2: Professional uses: Public domain ation, entertainment, services, craft	
Sectors of end-us		Agriculture, forestry, fishery	,
Environmental Re	elease : ERC8	a, ERC8d: Wide dispersive indoor	use of processing
Categories	aids i	n open systems, Wide dispersive o essing aids in open systems	
Process categorie	es : PRO	C11: Non industrial spraying	
of processing aid	s in open systems		
Activity	: Aeros	sols	
Amount used			
Daily amount per	site : 6.14 l	(g	
Annual amount p	er site : 2.24 t	onnes	
Environment fector	s not influenced by rick m	anagomont	
Environment factors Flow rate	s not influenced by risk m	nanagement 0 m3/day	

Flow rate	: 18,000 m3/day
Other given operational conditions Dispersive use	affecting environmental exposure
Number of emission days per	: 365
year Emission or Bolosso Easter: Air	

water

Technical conditions and measures / Organizational measures

rechnical conditions and measures	organizational measures
Air	<ul> <li>No air emission controls required; required removal efficiency is 0%.</li> </ul>
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: No soil emission controls required.
Conditions and measures related to	municipal sewage treatment plant
Type of Sewage Treatment Plant	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	: 2,000 m3/day
Percentage removed from waste	: 93.5 %

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# 2.2 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity Product characteristics Concentration of the Substance	: Insecticide, Aerosols, Indoor : Covers the percentage of the substance in the product up		
in Mixture/Article Physical Form (at time of use)	to 25 %. : Liquid, vapour pressure > 10 kPa		
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).		
Other operational conditions affecti Outdoor / Indoor	ng workers exposure : Indoor : , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.		
Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.			
Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)			

Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

# 2.3 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Insecticide, Aerosols, Indoor</li> <li>Covers the percentage of the substance in the product up to 25 %.</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Other operational conditions affecti Outdoor / Indoor	
5 and 15 air changes per hour are measure): 70 %)	pplied to dilute and remove dusts, fumes or vapours. Between recommended, with a through draught. (Effectiveness (of a other operations. (Effectiveness (of a measure): 50 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear

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gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop., Avoid carrying out operation for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

# 2.4 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity	: Insecticide, Aerosols, Outdoor
Product characteristics	
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecting	ng workers exposure
Outdoor / Indoor	: Outdoor
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
	/limit releases, dispersion and exposure
•	Itdoors., Avoid direct skin contact with product. Identify
	ntact. Wear gloves (tested to EN374) if hand contact with
	ination/spills as soon as they occur. Wash off any skin
and to report any skin problems th	de basic employee training to prevent / minimise exposures nat may develop.
Conditions and measures related to	personal protection, hygiene and health evaluation

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %) Wear a respirator conforming to EN140 with Type A filter or better. (Effectiveness (of a measure): 90 %)

# 2.5 Contributing scenario controlling worker exposure for: PROC11: Non industrial spraying

Activity Product characteristics	: Insecticide, Aerosols, Outdoor
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	

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Remarks		Covers daily exposures up to 8 hours (unle differently).	ess stated
Other operati	onal conditions affecting w	orkers exposure	
Outdoor / I	ndoor : (	Dutdoor	
	ť	Assumes use at not more than 20°C above emperature., Assumes a good basic stand occupational hygiene is implemented.	
Apply within	nditions and measures n a vented cab supplied wit 0. (Effectiveness (of a meas	h filtered air under positive pressure and v sure): 95 %)	with a protection
Organisation	al measures to prevent /lim	it releases, dispersion and exposure	

Ensure operation is undertaken outdoors., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		12 µg/L	0.022
ERC8a	EUSES		Marine water		1.15 µg/L	0.00593
ERC8a	EUSES		Fresh water sediment		22 µg/kg wwt	0.022
ERC8a	EUSES		Marine sediment		2.06 µg/kg wwt	0.00593
ERC8a	EUSES		Soil		8.40 µg/kg wwt	0.016
ERC8a	EUSES		Groundwate r		1.74 µg/L	0.00322
ERC8a	EUSES		Sewage treatment plant		76 µg/L	0.00293

#### Environment

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation	60 ppm	0.6

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			systemic exposure		
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	12.86 mg/kg/day	0.003
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic inhalation systemic exposure	54 ppm	0.54
PROC11	ECETOC TRA v2.0 Worker	Indoor	Chronic dermal systemic exposure	12.86 mg/kg/day	0.003
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	42 ppm	0.42
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	12.86 mg/kg/day	0.003
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic inhalation systemic exposure	21 ppm	0.21
PROC11	ECETOC TRA v2.0 Worker	Outdoor	Chronic dermal systemic exposure	12.86 mg/kg/day	0.003

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems PROC11: Non industrial spraying

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#### 1. Short title of Exposure Scenario: Packing and repacking of formulations

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental Release	: ERC8a, ERC8d: Wide dispersive indoor use of processing
Categories	aids in open systems, Wide dispersive outdoor use of processing aids in open systems
Process categories	<ul> <li>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non- dedicated facilities</li> </ul>
	PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Activity	: Aerosols
Amount used	
Daily amount per site	: 15.4 kg
Annual amount per site	: 5.62 tonnes
Environment factors not influenced	
Flow rate	: 18,000 m3/day
Other given operational conditions a Dispersive use	ffecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 1%
Emission or Release Factor: Water	: 1%
Emission or Release Factor: Soil	: 0.01 %
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: Soil emission controls are not applicable as there is no direct release to soil.

Conditions and measures related to municipal sewage treatment plant

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	ewage Treatment Plant of sewage treatment ent		icipal sewage treatment plant 0 m3/day	
Percentag water	e removed from waste	: 93.5	%	

2.2 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Activity Product characteristics	: Repackaging, Indoor
Concentration of the Substance in Mixture/Article	: Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	: Indoor
	<ul> <li>Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.</li> </ul>

**Technical conditions and measures** 

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 80 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop., Avoid carrying out operation for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.3 Contributing scenario controlling worker exposure for: PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Activity Product characteristics	: Repackaging, Outdoor
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	<ul> <li>Outdoor</li> <li>Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.</li> </ul>

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Organisational measures to prevent /limit releases, dispersion and exposure Ensure operation is undertaken outdoors., Avoid carrying out operation for more than 1 hour., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.4 Contributing scenario controlling worker exposure for: PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Activity Product characteristics	: Repackaging, Indoor
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affecti Outdoor / Indoor	ing workers exposure : Indoor : , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and measures Fill containers/cans at dedicated f (Effectiveness (of a measure): 90 °	illing points supplied with local extract ventilation.
Avoid direct skin contact with pro gloves (tested to EN374) if hand c soon as they occur. Wash off any	t /limit releases, dispersion and exposure duct. Identify potential areas for indirect skin contact. Wear ontact with substance likely. Clean up contamination/spills as skin contamination immediately. Provide basic employee osures and to report any skin problems that may develop.
	o personal protection, hygiene and health evaluation 374. (Effectiveness (of a measure): 80 %)
	olling worker exposure for: PROC8b: Transfer of ing/ discharging) from/ to vessels/ large containers at
Activity Product characteristics Concentration of the Substance in Mixture/Article	<ul> <li>Repackaging, Outdoor</li> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Physical Form (at time of use)	. Liquiu, vapoui piessuie > iv kra

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Other operational conditions affecting workers exposure Outdoor / Indoor : Outdoor

Outdoor
 , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Ensure operation is undertaken outdoors., Use dedicated equipment., Avoid carrying out operation for more than 1 hour., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.6 Contributing scenario controlling worker exposure for: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Activity Product characteristics	: Repackaging, Indoor
Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
Other operational conditions affection	ng workers exposure
Outdoor / Indoor	: Indoor
	: , Assumes use at not more than 20°C above ambient
	temperature., Assumes a good basic standard of occupational hygiene is implemented.
Technical conditions and macaures	

Technical conditions and measures

Fill containers/cans at dedicated filling points supplied with local extract ventilation. (Effectiveness (of a measure): 80 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

2.7 Contributing scenario controlling worker exposure for: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

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Activity		: Repa	ckaging, Outdoor		
Product char	acteristics				
in Mixture/Article		to 10	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>		
Other operati	ional conditions affecti	ng worke	rs exposure		
Outdoor / Indoor : O : , / te		temp	oor umes use at not more than 20°C ab erature., Assumes a good basic sta pational hygiene is implemented.		

Organisational measures to prevent /limit releases, dispersion and exposure Ensure operation is undertaken outdoors., Use dedicated equipment., Avoid carrying out operation for more than 1 hour., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

#### 3. Exposure estimation and reference to its source

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		0.283 mg/L	0.524
ERC8a	EUSES		Marine water		0.0282 mg/L	0.145
ERC8a	EUSES		Fresh water sediment		0.509 mg/kg wet weight	0.524
ERC8a	EUSES		Marine sediment		0.0507 mg/kg wet weight	0.145
ERC8a	EUSES		Soil		0.308 mg/kg dry weight	0.599
ERC8a	EUSES		Groundwate r		0.0639 mg/L	0.118
ERC8a	EUSES		Sewage treatment plant		2.78 mg/L	0.107

#### Environment

#### Workers

PROC8a	ECETOC TRA	Chronic	60 ppm	0.6
	v2.0 Worker	inhalation		
		systemic		
		exposure		
PROC8a	ECETOC TRA	Chronic	2.74	0.000
	v2.0 Worker	dermal	mg/kg/day	
		systemic		
		exposure		
PROC8a	ECETOC TRA	Chronic	70 ppm	0.7
	v2.0 Worker	inhalation		
		systemic		
		exposure		
PROC8a	ECETOC TRA	Chronic	2.74	0.000
	v2.0 Worker	dermal	mg/kg/day	
		systemic		
		exposure		
PROC8b	ECETOC TRA	Chronic	25 ppm	0.25
	v2.0 Worker	inhalation		
		systemic		
		exposure		
PROC8b	ECETOC TRA	Chronic	1.37	0.000
	v2.0 Worker	dermal	mg/kg/day	
		systemic		
		exposure		
PROC8b	ECETOC TRA	Chronic	35 ppm	0.35
	v2.0 Worker	inhalation		
		systemic		
DDOON		exposure	4.07	0.000
PROC8b	ECETOC TRA	Chronic	1.37	0.000
	v2.0 Worker	dermal	mg/kg/day	
		systemic		
PROC9	ECETOC TRA	exposure Chronic	50	0 5
PROCY	v2.0 Worker	inhalation	50 ppm	0.5
	vz.u worker			
		systemic		
PROC9	ECETOC TRA	exposure Chronic	1.37	0.000
FRUC9	v2.0 Worker	dermal		0.000
			mg/kg/day	
		systemic		
PROC9	ECETOC TRA	exposure Chronic	25 nnm	0.35
PROCY	v2.0 Worker	inhalation	35 ppm	0.50
		systemic		
PROC9		exposure	1.37	0.000
PRUCY	ECETOC TRA v2.0 Worker	Chronic dermal		0.000
			mg/kg/day	
		systemic		

ERC8a: Wide dispersive indoor use of processing aids in open systems

ERC8d: Wide dispersive outdoor use of processing aids in open systems

PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

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PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

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#### 1. Short title of Exposure Scenario: Laboratory Reagents

Main User Groups	: SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Sectors of end-use	: SU24: Scientific research and development
Environmental Release	: ERC8a: Wide dispersive indoor use of processing aids in
Categories	open systems
Process categories	: PROC10: Roller application or brushing
-	PROC15: Use as laboratory reagent

# 2.1 Contributing scenario controlling environmental exposure for: ERC8a: Wide dispersive indoor use of processing aids in open systems

Activity	: Aerosols
Amount used Daily amount per site Annual amount per site	: 704 kg : 257 tonnes
Environment factors not influenced	
Flow rate	: 18,000 m3/day
Other given operational conditions a Dispersive use	affecting environmental exposure
Number of emission days per year	: 365
Emission or Release Factor: Air	: 0.5 %
Emission or Release Factor: Water	: 0.5 %
Emission or Release Factor: Soil	: 0%
Remarks	: Indoor use
Technical conditions and measures	/ Organizational measures
Air	: No air emission controls required; required removal efficiency is 0%.
Water	: Ensure all waste water is collected and treated via a WWTP., Prevent discharge of undissolved substance to or recover from wastewater.
Soil	: No soil emission controls required.
Conditions and measures related to	municipal sewage treatment plant
	: Municipal sewage treatment plant
Flow rate of sewage treatment plant effluent	
Percentage removed from waste water	: 93.5 %

2.2 Contributing scenario controlling worker exposure for: PROC10: Roller application or brushing

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Activity Product char	actoristics	: Coa	tings and paints, thinners, paint rem	overs, Indoor
Concentrat in Mixture/	tion of the Substance	to 10	ers the percentage of the substance 00 % (unless stated differently). id, vapour pressure > 10 kPa	in the product up
		tem	sumes use at not more than 20°C abo perature., Assumes a good basic sta upational hygiene is implemented.	
Technical co	nditions and measures			

Technical conditions and measures

Provide extraction ventilation at points where emissions occur. (Effectiveness (of a measure): 80 %)

Organisational measures to prevent /limit releases, dispersion and exposure Avoid carrying out operation for more than 4 hours., Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 90 %)

2.3 Contributing scenario controlling worker exposure for: PROC15: Use as laboratory reagent

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	<ul> <li>Covers the percentage of the substance in the product up to 100 % (unless stated differently).</li> <li>Liquid, vapour pressure &gt; 10 kPa</li> </ul>
Frequency and duration of use	
Remarks	: Covers daily exposures up to 8 hours (unless stated differently).
	: , Assumes use at not more than 20°C above ambient temperature., Assumes a good basic standard of occupational hygiene is implemented.

Organisational measures to prevent /limit releases, dispersion and exposure Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation Wear suitable gloves tested to EN374. (Effectiveness (of a measure): 80 %)

3. Exposure estimation and reference to its source

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#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		5.77 µg/L	0.011
ERC8a	EUSES		Marine water		0.481 µg/L	0.00248
ERC8a	EUSES		Fresh water sediment		10 µg/kg wwt	0.011
ERC8a	EUSES		Marine sediment		0.865 µg/kg wwt	0.00248
ERC8a	EUSES		Soil		1.02 µg/kg wwt	0.00199
ERC8a	EUSES		Groundwate r		0.221 µg/L	0.000409
ERC8a	EUSES		Sewage treatment plant		9.13 µg/L	0.000353

#### Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PROC10	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	60 ppm	0.6
PROC10	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	5.49 mg/kg/day	0.0012
PROC15	ECETOC TRA v2.0 Worker		Chronic inhalation systemic exposure	50 ppm	0.5
PROC15	ECETOC TRA v2.0 Worker		Chronic dermal systemic exposure	0.07 mg/kg/day	0.00001

ERC8a: Wide dispersive indoor use of processing aids in open systems PROC10: Roller application or brushing PROC15: Use as laboratory reagent

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#### 1. Short title of Exposure Scenario: Consumer use Main User Groups : SU 21: Consumer uses: Private households (= general public = consumers) Sectors of end-use : SU 21: Consumer uses: Private households (= general public = consumers) : ERC8a, ERC8d: Wide dispersive indoor use of processing Environmental Release aids in open systems, Wide dispersive outdoor use of Categories processing aids in open systems Chemical product category : PC1: Adhesives, sealants PC8: Biocidal products (e.g. Disinfectants, pest control) PC9: Coatings and Paints, Fillers, Putties, Thinners PC27: Plant protection products PC35: Washing and cleaning products (including solvent based products) PC39: Cosmetics, personal care products

# 2.1 Contributing scenario controlling environmental exposure for: ERC8a, ERC8d: Wide dispersive indoor use of processing aids in open systems, Wide dispersive outdoor use of processing aids in open systems

Amount used Daily amount per site Annual amount per site		15.4 kg 5.62 tonnes
Environment factors not influenced I Flow rate	-	risk management 18,000 m3/day
Flow fale	•	10,000 m3/day
Other given operational conditions a Dispersive use	ffe	ecting environmental exposure
Number of emission days per year	:	365
Emission or Release Factor: Air	:	1 %
Emission or Release Factor: Water	:	1 %
Emission or Release Factor: Soil	:	0.01 %
Conditions and measures related to Type of Sewage Treatment Plant Flow rate of sewage treatment plant effluent Percentage removed from waste water	:	Municipal sewage treatment plant 2,000 m3/day

# 2.2 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Glues from tube

Product characteristics

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Concentration of t in Mixture/Article Physical Form (at		Covers the percentage of the substance in the pro to 100 % (unless stated differently). Liquid, vapour pressure > 10 kPa	duct up
Amount used Amount used per	event :	9 gram	
Frequency and dura Duration of the ac Frequency of use	itivity :	< 240 min 52 days/year	
Human factors not ir Dermal exposure		nanagement 2 cm2	
Other given operatio Room size Remarks	:	cting consumers exposure 20 m3 Assumes activities are at ambient temperature (ur stated differently)., Assumes use with typical vent	
Conditions and mea protection and hygie Consumer Measur	ene)	otection of consumer (e.g. behavioural advice, pers Avoid skin contact area greater than 2 cm2	sonal
2.3 Contributing so	cenario controllin	g consumer exposure for: PC1: Adhesives, se	alants
Activity Product characterist	tics	Use of sealants by rolling	
Physical Form (at	time of use) :	Liquid, vapour pressure > 10 kPa	
Amount used Amount used per	event :	10 gram	
Frequency and dura Duration of the ac Frequency of use	itivity :	< 240 min 52 days/year	
Human factors not ir Dermal exposure		nanagement 2 cm2	
Other given operatio Room size Remarks	:	cting consumers exposure 20 m3 Assumes activities are at ambient temperature (ur stated differently)., Assumes use with typical vent	
Conditions and mean protection and hygic Consumer Measur	ene)	otection of consumer (e.g. behavioural advice, pers Avoid skin contact area greater than 2 cm2	sonal

2.4 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Super glue

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Product characteristics Physical Form (at time of use)	: Liquid	vapour pressure > 10 kPa	
Amount used Amount used per event	: 0.5 gra	m	
Frequency and duration of use Duration of the acitivity Frequency of use	: < 240 r : 12 day		
Human factors not influenced by ri Dermal exposure	sk manager : 2 cm2	nent	
Other given operational conditions Room size Remarks	: 20 m3 : Assum	onsumers exposure les activities are at ambient tempe differently)., Assumes use with ty	
Conditions and measures related t protection and hygiene) Consumer Measures	-	of consumer (e.g. behavioural ac skin contact area greater than 2 c	
2.5 Contributing scenario contr DIY - Wood parquet glue	olling cons	umer exposure for: PC1: Adhe	esives, sealants :
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)		s percentage substance in the pro vapour pressure > 10 kPa	duct up to 10%.
Amount used Amount used per event	: 0.75 kg	I	
Frequency and duration of use Duration of the acitivity Remarks	: < 240 r : 0.25, e	nin vent(s)/year	
Human factors not influenced by ri Dermal exposure	sk manager : 110 cm		
Other given operational conditions Room size Remarks	: 58 m3 : Assum	onsumers exposure les activities are at ambient tempe differently)., Assumes use with ty	
Conditions and measures related t protection and hygiene) Consumer Measures	: Avoid using a	of consumer (e.g. behavioural ad skin contact area greater than 110 at a product concentration greate when windows closed	0 cm2, Avoid

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2.6 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Carpet glue

Product characteristics Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Amount used Amount used per event	: 1 kg
Frequency and duration of use Duration of the acitivity Remarks	: <75 min : 0.25, event(s)/year
Human factors not influenced by ris Dermal exposure	k management : 110 cm2
Other given operational conditions a Room size Remarks	<ul> <li>affecting consumers exposure</li> <li>58 m3</li> <li>Assumes activities are at ambient temperature (unless stated differently)., Assumes use with typical ventilation</li> </ul>
Conditions and measures related to protection and hygiene) Consumer Measures	<ul> <li>protection of consumer (e.g. behavioural advice, personal</li> <li>Avoid skin contact area greater than 110 cm2, Avoid using at a product concentration greater than 10%, Avoid using when windows closed</li> </ul>

2.7 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Glue from spray

Product characteristics Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Frequency and duration of use	
Duration of the acitivity	: < 240 min
Frequency of use	: 12 days/year
Human factors not influenced by ri	sk management
Dermal exposure	: 430 cm2
Other given operational conditions	affecting consumers exposure
Room size	: 20 m3
Remarks	: Assumes activities are at ambient temperature (unless stated differently)., Assumes use with typical ventilation
Conditions and measures related to protection and hygiene)	o protection of consumer (e.g. behavioural advice, personal

Consumer Measures	: Spraying away from exposed person, Avoid skin contact
	area greater than 430 cm2, Avoid using at a product

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concentration greater than 20%			

2.8 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Glue from spray (joint sealants)

Product characteristics Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Amount used	
Amount used per event	: 75 gram
Frequency and duration of use	
Duration of the acitivity	: 45 min
Frequency of use	: 3 days/year
Human factors not influenced by ri	sk management
Dermal exposure	: 2 cm2
Other given operational conditions	affecting consumers exposure
Room size	: 10 m3
Remarks	: Assumes activities are at ambient temperature (unless stated differently)., Assumes use with typical ventilation
Conditions and measures related to protection and hygiene)	o protection of consumer (e.g. behavioural advice, personal

Consumer Measures

: Avoid skin contact area greater than 2 cm2, Avoid using at a product concentration greater than 10%

# 2.9 Contributing scenario controlling consumer exposure for: PC1: Adhesives, sealants : DIY - Assembly sealants

Product characteristics Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Amount used	
Amount used per event	: 390 gram
Frequency and duration of use	
Duration of the acitivity	: < 240 min
Frequency of use	: 1 days/year
Human factors not influenced by ris	k management
Dermal exposure	: 43 cm2
Other given operational conditions a	affecting consumers exposure
Room size	: 20 m3
Remarks	: Assumes activities are at ambient temperature (unless stated differently)., Assumes use with typical ventilation

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Conditions and mea protection and hygie		on of consumer (e.g. behavioural	advice, personal
Consumer Measur	res : Avoi at a p	d skin contact area greater than 4 product concentration greater tha n windows closed	
2.10 Contributing s Fillers, Putties, Th	0	onsumer exposure for: PC9: C	oatings and Paints,
Product characterist Physical Form (at		id, vapour pressure > 10 kPa	
Amount used Amount used per	event : 279 ç	gram	
Frequency and dura Duration of the ac Frequency of use			
Other given operation	onal conditions affecting : 34 m		
Remarks	: Assu	umes activities are at ambient tem ed differently)., Assumes use with	
		on of consumer (e.g. behavioural	advice, personal
protection and hygie Consumer Measu	res : Spra	ying away from exposed person, luct concentration greater than 20	
2.11 Contributing s products	scenario controlling co	onsumer exposure for: PC27: I	Plant protection
Product characterist Physical Form (at		id, vapour pressure > 10 kPa	
Amount used Amount used per	event : 14.85	5 gram	
Frequency and dura Duration of the ac Frequency of use	itivity : < 240	0 min ays/year	
Other given operation Room size Remarks		-	

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Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Spraying away from exposed person, Avoid using at a

: Spraying away from exposed person, Avoid using at a product concentration greater than 20%

# 2.12 Contributing scenario controlling consumer exposure for: PC35: Washing and cleaning products (including solvent based products)

Product characteristics Physical Form (at time of use)	: Liquid, vapour pressure > 10 kPa
Amount used	
Amount used per event	: 27 gram
Frequency and duration of use	
Duration of the acitivity	: < 60 min
Frequency of use	: 1 event/day
Frequency of use	: 128 days/year
Human factors not influenced by ris	sk management
Dermal exposure	: 215 cm2
Other given operational conditions	affecting consumers exposure
Room size	: 15 m3
Remarks	<ul> <li>Assumes activities are at ambient temperature (unless stated differently)., Covers use under typical household ventilation</li> </ul>
Conditions and measures related to	o protection of consumer (e.g. behavioural advice, personal

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Consumer Measures	: Avoid skin contact area greater than 215 cm2, Avoid
	using at a product concentration greater than 20%

#### 3. Exposure estimation and reference to its source

#### Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartme nt	Value	Level of Exposure	RCR
ERC8a	EUSES		Fresh water		13 µg/L	0.024
ERC8a	EUSES		Marine water		1.19 µg/L	0.00613
ERC8a	EUSES		Fresh water sediment		23	0.024
ERC8a	EUSES		Marine sediment		2.14	0.00613
ERC8a	EUSES		Soil		8.86	0.017
ERC8a	EUSES		Groundwate r		1.84 µg/L	0.00341

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ERC8a	EUSES	Sewage treatment plant	80 µg/L 0.00308

Consumers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR
PC1	Consexpo	DIY - Glues from tube	Acute inhalation systemic exposure		0.44
PC1	Consexpo	DIY - Glues from tube	Chronic inhalation systemic exposure		0.29
PC1	Consexpo	DIY - Glues from tube	Chronic dermal systemic exposure		0.0006
PC1	Consexpo	Use of sealants by rolling	Acute inhalation systemic exposure		0.44
PC1	Consexpo	Use of sealants by rolling	Chronic inhalation systemic exposure		0.29
PC1	Consexpo	Use of sealants by rolling	Chronic dermal systemic exposure		0.0006
PC1	Consexpo	DIY - Super glue	Acute inhalation systemic exposure		0.44
PC1	Consexpo	DIY - Super glue	Chronic inhalation systemic exposure		0.29
PC1	Consexpo	DIY - Super glue	Chronic dermal systemic exposure		0.0006
PC1	Consexpo	DIY - Wood parquet glue	Acute inhalation systemic exposure		0.44
PC1	Consexpo	DIY - Wood parquet glue	Chronic inhalation systemic exposure		0.29
PC1	Consexpo	DIY - Wood parquet glue	Chronic		0.0006

			dermal systemic exposure	
PC1	Consexpo	DIY - Carpet glue	Acute inhalation systemic exposure	0.44
PC1	Consexpo	DIY - Carpet glue	Chronic inhalation systemic exposure	0.29
PC1	Consexpo	DIY - Carpet glue	Chronic dermal systemic exposure	0.000
PC1	Consexpo	DIY - Glue from spray	Acute inhalation systemic exposure	0.44
PC1	Consexpo	DIY - Glue from spray	Chronic inhalation systemic exposure	0.29
PC1	Consexpo	DIY - Glue from spray	Chronic dermal systemic exposure	0.000
PC1	Consexpo	DIY - Glue from spray (joint sealants)	Acute inhalation systemic exposure	0.44
PC1	Consexpo	DIY - Glue from spray (joint sealants)	Chronic inhalation systemic exposure	0.29
PC1	Consexpo	DIY - Glue from spray (joint sealants)	Chronic dermal systemic exposure	0.000
PC1	Consexpo	DIY - Assembly sealants	Acute inhalation systemic exposure	0.44
PC1	Consexpo	DIY - Assembly sealants	Chronic inhalation systemic exposure	0.29
PC1	Consexpo	DIY - Assembly sealants	Chronic dermal systemic exposure	0.000
PC9	Consexpo		Acute inhalation systemic exposure	0.44

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PC9	Consexpo	Chronic inhalation systemic exposure	0.29
PC9	Consexpo	Chronic dermal systemic exposure	0.0006
PC27	Consexpo	Acute inhalation systemic exposure	0.44
PC27	Consexpo	Chronic inhalation systemic exposure	0.29
PC27	Consexpo	Chronic dermal systemic exposure	0.0006
PC35	Consexpo	Acute inhalation systemic exposure	0.44
PC35	Consexpo	Chronic inhalation systemic exposure	0.29
PC35	Consexpo	Chronic dermal systemic exposure	0.0006

ERC8a: Wide dispersive indoor use of processing aids in open systems ERC8d: Wide dispersive outdoor use of processing aids in open systems PC1: Adhesives, sealants PC27: Plant protection products PC35: Washing and cleaning products (including solvent based products) PC9: Coatings and Paints, Fillers, Putties, Thinners