Exodime D40

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Date of issue: 18/11/2014 Revision date: 13/06/2024 Version: 2.8

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Exodime D40
UFI : VAEF-1THF-R50T-25X6
EC-No. : 220-020-5
CAS-No. : 2605-79-0
Type of product : Aqueous solution.

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Consumer use,Professional use,Industrial use
Industrial/Professional use spec : Wide dispersive use
Use of the substance/mixture : non-ionic surfactants

Title	Use descriptors
Manufacture of substances (ES Ref.: 1.0)	SU8, PC35, PROC4, PROC8a, PROC8b, PROC9, PROC15, ERC1
Formulation (ES Ref.: 2.0)	SU3, SU10, PC21, PC25, PC31, PC35, PC37, PC39, PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15, AISE spERC 2.1 j, k, l v1:, COLIPA spERC 2.1 a, b, c v1:
Industrial use of processing aids in processes and products, not becoming part of articles (ES Ref.: 3.0)	SU3, PC25, PC35, PC37, PROC1, PROC2, PROC4, PROC7, PROC8b, PROC10, PROC13, PROC15, PROC17, AISE ERC 4.1v1 (AISE ERC 5.1 v1)
Wide dispersive use (ES Ref.: 4.0)	SU22, PC21, PC31, PC35, PC39, PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, ERC8a
Wide dispersive use (ES Ref.: 5.0)	SU21, PC35, PC39, ERC8a

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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Via Famiglia Iona 25
IT– 13100 Vercelli
Italy
T +390161394695 - F +390161393907
reach@eocgroup.com - www.eocgroup.com

1.4. Emergency telephone number

Emergency number : +390161394695

Country	Organisation/Company	Address	Emergency number	Comment
Austria	Vergiftungsinformationszentrale	Stubenring 6 1010	+43 1 406 43 43	

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)
Bulgaria	Национален токсикологичен информационен център Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов"	бул. Ген. Едуард И. Тотлебен 21 1606	+359 2 9154 233	
Croatia	Centar za kontrolu otrovanja Institut za medicinska istraživanja i medicinu rada	Ksaverska Cesta 2 p.p. 291 10000	+385 1 234 8342	Information available 24/7 in Croatian and English
Cyprus	Κέντρου Δηλητηριάσεων		1401	Operating hours 24 hours / 24 hours, 7 days a week
Czech Republic	Toxikologické informační středisko Klinika pracovního lékařství VFN a 1. LF UK	Na Bojišti 1 120 00	+420 224 919 293 +420 224 915 402	
Denmark	Giftlinjen Bispebjerg Hospital	Bispebjerg Bakke 23E Opgang 20 C 2400	+45 82 12 12 12	
Estonia	Mürgistusteabekeskus Terviseamet	Paldiski mnt 81 10614	16662 +372 7943 794	Calling the hotline is anonymous and at the cost of a local call.
Finland	Myrkytystietokeskus	Stenbäckinkatu 9 PO BOX 100 00029	+358 800 147 111 +358 9 471 977	Open 24 hours a day 0800 147 111 (free of charge) 09 471 977 (normal rate call)
France	Centre Antipoison et de Toxicovigilance de Nancy Hôpital Central	29 avenue du Maréchal de Lattre-de-Tassigny 54035	+33 3 83 22 50 50	
Germany	Giftnotruf der Charité - Universitätsmedizin Berlin CBF, Haus VIII (Wirtschaftgebäude), UG	Hindenburgdamm 30 12203	+49 (0) 30 19240	
Greece	Poisons Information Centre Children's Hospital P&A Kyriakou	11762	+30 21 07 79 37 77	
Iceland	Eitrunarmiðstöð Landspítali	101	+354 543 22 22 +354 543 10 00	Around the clock, every day
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Italy	Centro Antiveleni di Roma CAV Policlinico "Umberto I", Università di Roma	Viale del Policlinico, 155 00161	+39 06 4997 8000	

Country	Organisation/Company	Address	Emergency number	Comment
Latvia	Valsts ugunsdzēsības un glābšanas dienests Toksikoloģijas un sepses klīnikas Saindēšanās un zāļu informācijas centrs	Hipokrāta 2 1038	112 +371 67 04 24 73	works 24 hours a day
Lithuania	Apsinuodijimų informacijos biuras	Šiltnamių g. 29 04130	+370 5 236 20 52 +370 687 53378	
Luxembourg	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 1120	+352 8002 5500	Free telephone number with a 24/7 access. Experts answer all urgency questions on dangerous products in French, Dutch and English
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD 2090	+356 2545 6508	
Netherlands	Nationaal Vergiftigingen Informatie Centrum	Huispostnummer B.00.118 Postbus 85500 3508 GA	+31 88 755 80 00	Only for the purpose of informing medical personnel in cases of acute intoxications (24 hours a day, 7 days a week)
Norway	Giftinformasjonen Helsedirektoratet	P.O. Box 7000 St. Olavs Plass 130	+47 22 59 13 00	Operating hours 24 hours / 24 hours, 7 days a week
Poland	Pomorskie Centrum Toksykologii Szpital MSWiA	Ul. Kartuska 4/6 80-104	+48 58 682 04 04 +48 58 309 83 83	
Portugal	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica	Rua Almirante Barroso, 36 1000-013	+351 800 250 250	
Romania	Department of Clinical Toxicology Spitalul de Urgenta Floreasca	Calea Floreasca	+40 21 230 8000	
Slovakia	Národné toxikologické informačné centrum Univerzitná nemocnica Bratislava, pracovisko Kramáre, Klinika pracovného lekárstva a toxikológie	Limbová 5 833 05	+421 2 54 77 41 66	
Slovenia	Center za klinično toksikologijo in farmakologijo Univerzitetni klinični, Center ljubljana	Zaloška 7 1000	112 +386 522 52 83	
Spain	Servicio de Información Toxicológica Instituto Nacional de Toxicología y Ciencias Forenses, Departamento de Madrid	C/José Echegaray nº4 28232	+34 91 562 04 20	(Toxicological emergencies only). Information in Spanish (24/7)
Sweden	Giftinformationscentralen	Solna Strandväg 21 171 54	112 – begär Giftinformation	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400

Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05 GHS09

CLP Signal word : Danger
Contains : N,N-dimethyldecylamine N-oxide
Hazard statements (CLP) : H318 - Causes serious eye damage.
H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.
P391 - Collect spillage.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N,N-dimethyldecylamine N-oxide	CAS-No.: 2605-79-0 EC-No.: 220-020-5 REACH-no: 01-2119959297-22	40	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. If unconscious place in recovery position and seek medical advice. In case of respiratory arrest, administer artificial respiration. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Take victim to a doctor if irritation persists.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash with plenty of water.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not apply (chemical) neutralizing agents. In case of eye irritation consult an ophthalmologist.

First-aid measures after ingestion : Rinse mouth thoroughly with water. In case of ingestion. Take to hospital.

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

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Eye damage / irritation.

4.3. Indication of any immediate medical attention and special treatment needed

If exposed or concerned, get medical advice and attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water. Carbon dioxide (CO2). sand. All extinguishing media can be used.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Low.

Explosion hazard : None known.

5.3. Advice for firefighters

Precautionary measures fire : Keep upwind. Do not inhale explosion and combustion gases.

Firefighting instructions : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Protection during firefighting : Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. face shield. protective clothing. Contact with walking surface may result in formation of slippery film/falling hazard.

Emergency procedures : Wash contaminated clothing immediately. Keep public away from danger area.

6.1.2. For emergency responders

Protective equipment : Wear protective gloves/protective clothing and eye/face protection.

Emergency procedures : Avoid contact with skin, eyes and clothes.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain leaking substance, pump over in suitable containers. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

Methods for cleaning up : Contain leaking substance, pump over in suitable containers. Clean up any spills as soon as possible, using an absorbent material to collect it. Collect in closed and suitable containers for disposal. To clean the floor and all objects contaminated by this material, use plenty of water. Take off contaminated clothing.

Other information : Comply with local regulations for disposal.

6.4. Reference to other sections

Disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with applicable regulations. Remove contaminated clothing immediately. Clean contaminated objects and areas thoroughly observing environmental regulations. Keep away from sources of ignition - No smoking. Handle in accordance with good industrial hygiene and safety procedures. Discharge into the environment must be avoided. Keep container tightly closed. Either local exhaust or general room ventilation is usually required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Use good personal hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Clean bulk tanks periodically to prevent accumulation of bacteria.

Storage conditions : Protect against: frost. Protect against direct sunlight.

Storage temperature : see technical datasheet

Storage area : Store in a dry area. Comply with applicable regulations. Collect spillage.

Packaging materials : Plastic.

7.3. Specific end use(s)

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

N,N-dimethyldecylamine N-oxide (2605-79-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	11 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6.2 mg/m³

N,N-dimethyldecylamine N-oxide (2605-79-0)	
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.44 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.53 mg/m³
Long-term - systemic effects, dermal	5.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0335 mg/l
PNEC aqua (marine water)	0.00335 mg/l
PNEC aqua (intermittent, freshwater)	0.0335 mg/l
PNEC aqua (intermittent, marine water)	0.0335 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	5.24 mg/kg dwt
PNEC sediment (marine water)	0.524 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.02 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	0.0000111 kg/kg food
PNEC (STP)	
PNEC sewage treatment plant	4.59 mg/l

Safe handling : see section 7

Additional information : To date, no national critical limit values exist.

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses (EN 166)

8.2.2.2. Skin protection

Skin and body protection:
Avoid contact with skin.

Hand protection:
Nitrile rubber gloves (thickness: 0.38mm)

8.2.2.3. Respiratory protection

Respiratory protection:
Not applicable

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Appearance	:	as liquid.
Odour	:	characteristic.
Odour threshold	:	Inconclusive
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	like water
Flammability	:	Not flammable
Explosive properties	:	None.
Oxidising properties	:	None.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 150 °C
pH	:	6 – 8
Viscosity, kinematic	:	104.167 mm²/s
Viscosity, dynamic	:	100 mPa·s Brookfield RV 1/20 @20°C
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	like water
Vapour pressure at 50°C	:	Not available
Density	:	0.96 kg/l @20°C
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Other properties	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : Strong acids.

10.2. Chemical stability

SECTION 7: Handling and storage.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

SECTION 7: Handling and storage.

10.5. Incompatible materials

Strong acids. Materials that react violently or explosively with water.

10.6. Hazardous decomposition products

On burning: release of (highly) toxic gases/vapours. Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

N,N-dimethyldecylamine N-oxide (2605-79-0)	
LD50 oral rat	1064 mg/kg

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 6 – 8

Serious eye damage/irritation : Causes serious eye damage.
pH: 6 – 8

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Exodime D40 (2605-79-0)	
Viscosity, kinematic	104.167 mm²/s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This product contains hazardous components for the aquatic environment.

Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

N,N-dimethyldecylamine N-oxide (2605-79-0)	
LC50 - Fish [1]	31.8 mg/l

N,N-dimethyldecylamine N-oxide (2605-79-0)	
EC50 - Crustacea [1]	3.43 mg/l
ErC50 algae	0.16 mg/l
NOEC (chronic)	0.067 mg/l

12.2. Persistence and degradability

N,N-dimethyldecylamine N-oxide (2605-79-0)	
Persistence and degradability	This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.
Biodegradation	97 % OECD 301 E

12.3. Bioaccumulative potential

N,N-dimethyldecylamine N-oxide (2605-79-0)	
Partition coefficient n-octanol/water (Log Pow)	0.95

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Exodime D40 (2605-79-0)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Waste disposal according to EC directives 75/442/EC, 91/689/EC and 2008/98/EC in the corresponding versions, covering waste and dangerous waste.

Waste treatment methods : Do not allow to enter into surface water or drains. Product should not be released into water without pre-treatment (biological sewage plant).

Sewage disposal recommendations : If discharging to municipal sewage treatment plant, no onsite wastewater treatment required.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. This material should not be landfilled or deep well injected as a method of disposal. Recycled/recovered. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR)	:	UN 3082
UN-No. (IMDG)	:	UN 3082
UN-No. (IATA)	:	UN 3082
UN-No. (ADN)	:	UN 3082
UN-No. (RID)	:	UN 3082

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA)	:	Environmentally hazardous substance, liquid, n.o.s.
Proper Shipping Name (ADN)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (RID)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description (ADR)	:	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-dimethyldecylamine N-oxide), 9, III, (-)
Transport document description (IMDG)	:	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-dimethyldecylamine N-oxide), 9, III, MARINE POLLUTANT
Transport document description (IATA)	:	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (N,N-dimethyldecylamine N-oxide), 9, III
Transport document description (ADN)	:	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-dimethyldecylamine N-oxide), 9, III
Transport document description (RID)	:	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-dimethyldecylamine N-oxide), 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 9

Danger labels (ADR) : 9

:

IMDG

Transport hazard class(es) (IMDG) : 9

Danger labels (IMDG) : 9

:

IATA

Transport hazard class(es) (IATA) : 9

Danger labels (IATA) : 9

:

ADN

Transport hazard class(es) (ADN) : 9

Danger labels (ADN) : 9

:

RID

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9

:

14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Subject to the provisions

Classification code (ADR) : M6

Special provisions (ADR) : 274, 335, 375, 601

Limited quantities (ADR) : 5l

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : PP1

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T4

Portable tank and bulk container special provisions (ADR) : TP1, TP29

Tank code (ADR) : LGBV

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13

Hazard identification number (Kemler No.) : 90

Orange plates :

Tunnel restriction code (ADR) : -

EAC code : •3Z

Transport by sea

Transport regulations (IMDG) : Subject to the provisions

Special provisions (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : LP01, P001

Special packing provisions (IMDG) : PP1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP1, TP29

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Stowage category (IMDG) : A

Air transport

Transport regulations (IATA)	:	Subject to the provisions
PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	450L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	450L
Special provisions (IATA)	:	A97, A158, A197, A215
ERG code (IATA)	:	9L

Inland waterway transport

Classification code (ADN)	:	M6
Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

Rail transport

Transport regulations (RID)	:	Subject to the provisions
Classification code (RID)	:	M6
Special provisions (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	PP1
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW31
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations	:	according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010. Labelling according to Regulation (EC) No. 1272/2008 [CLP]. Other regulations (EU). Not applicable.

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(b)	Exodime D40

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(c)	Exodime D40

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List ≥ 0,1 % / SCL

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Seveso Directive (Disaster Risk Reduction)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1	100	200
E2 Hazardous to the Aquatic Environment in Category Chronic 2	200	500

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

To date, no national critical limit values exist.

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
	Exposure scenarios	Added	

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Full text of use descriptors	
AISE ERC 4.1v1 (AISE ERC 5.1 v1)	
AISE spERC 2.1 j, k, l v1:	Formulation of liquids detergents/maintenance products: High viscosity (large, medium/small and very small scale)
COLIPA spERC 2.1 a, b, c v1:	Formulation of low viscosity liquids (Shampoo, hair conditioner, shower gel, foam bath) (large scale/medium/small scale)
ERC1	Manufacture of the substance
ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
PC21	Laboratory chemicals
PC25	Metal working fluids
PC31	Polishes and wax blends
PC35	Washing and cleaning products
PC37	Water treatment chemicals
PC39	Cosmetics, personal care products
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent
PROC17	Lubrication at high energy conditions in metal working operations
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises

Full text of use descriptors	
PROC5	Mixing or blending in batch processes
PROC7	Industrial spraying
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
SU10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU21	Consumer uses: Private households (= general public = consumers)
SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Dam. 1	H318	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 2	H411	Calculation method

Safety Data Sheet (SDS), EU

All recommendations for the use of our products, whether given by us , orally, or to be implied from data or test results obtained by us, are based on the current state of our knowledge at the time such recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding such recommendations the user is responsible that the product as supplied by us, is suitable for the process or purpose he intends to use it. The user of the product is solely responsible for compliance with all laws and regulation applying to the use of the product. Since we cannot control the application, use or processing of the products, we do not accept responsibility therefore. The user shall ensure that the intended use of the products will not infringe in any party's intellectual property rights

Annex to the safety data sheet

Product exposure scenario(s)	
ES Type	**ES title**
Worker	Manufacture of substances
Worker	Formulation
Worker	Industrial use of processing aids in processes and products, not becoming part of articles
Worker	Wide dispersive use
Consumer	Wide dispersive use

1. Exposure scenario 1.0

Manufacture of substances	
ES Ref.: 1.0 ES Type: Worker	

Use descriptors	SU8 PROC4, PROC8a, PROC8b, PROC9, PROC15 PC35 ERC1
Processes, tasks, activities covered	Use at industrial sites (IS)
Assessment method	Used ECETOC TRA model EUSES

2. Operational conditions and risk management measures

2.1. Contributing scenario controlling worker exposure (PROC4, PROC8a, PROC8b, PROC9, PROC15)

PROC4	Chemical production where opportunity for exposure arises
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC15	Use as laboratory reagent

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	≤ 40 %
	Aqueous solution.

Operational conditions		
Amounts used	Not required	
Frequency and duration of use	PROC 4, 8a, 8b, 9	8 H/Day
	PROC 15:	2 H/Day
Human factors not influenced by risk management	Product sampling	
Other given operational conditions affecting workers exposure	Indoor use	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Partially. Used in closed systems	
	Batch process	
Technical conditions and measures to control dispersion from source towards the worker	Local exhaust ventilation - efficiency of at least	90
Organisational measures to prevent/limit releases, dispersion and exposure	Other information : OHSAS	

Risk Management Measures		
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection. Wear suitable gloves tested to EN374. ≥ Category 2	

2.2. Contributing scenario controlling environmental exposure (ERC1)

ERC1	Manufacture of the substance

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	≤ 40 %
	Aqueous solution.

Operational conditions		
Frequency and duration of use	Number of production days	20 Day/Year
Environmental factors not influenced by risk management	Not applicable	The environmental release is considered negligible
Other given operational conditions affecting environmental exposure	Partially,Closed system	
	Ensure waste is collected and contained.	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Partially. Closed system	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Contain the spilled material by bunding	
Organisation measures to prevent/limit release from site	Ensure waste is collected and contained.	
Conditions and measures related to sewage treatment plant	Not applicable as there is no release to wastewater	
Conditions and measures related to external treatment of waste for disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations	
Conditions and measures related to external recovery of waste	Not applicable	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

3.2. Environment

Information for contributing exposure scenario	
2.2	EUSES

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

4.1. Health

Guidance - Health	Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

4.2. Environment

Guidance - Environment	Predicted exposures are not expected to exeed the PNECs when the Risk Management Measures/Operational Conditions outlined in section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

Additional good practice advice beyond the REACH CSA

No available data

1. Exposure scenario 2.0

Formulation	
ES Ref.: 2.0 ES Type: Worker	

Use descriptors	SU3, SU10 PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15 PC21, PC25, PC31, PC35, PC37, PC39 AISE spERC 2.1 j, k, l v1:, COLIPA spERC 2.1 a, b, c v1:
Processes, tasks, activities covered	Use at industrial sites (IS)
Assessment method	Used ECETOC TRA model EUSES

2. Operational conditions and risk management measures

2.1. Contributing scenario controlling worker exposure (PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15)

PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	≤ 40 %
	Aqueous solution.

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 1, 2, 3, 4, 5, 8a, 8b, 9, 14,15:	8 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Used in closed systems	
	Batch process	
	Recycle product or dispose safely	
Technical conditions and measures to control dispersion from source towards the worker	Used in closed systems	
	Batch process	
	aerosol or mist formation	Negligible.
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Loading of application equipment
	Wear suitable gloves tested to EN374. ≥ Category 2	Loading of application equipment

2.2. Contributing scenario controlling environmental exposure

AISE spERC 2.1, COLIPA spERC 2.1

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution.

Operational conditions		
Frequency and duration of use	Release times per year	
	large scale,medium scale	220 Day/Year
	small scale	20 Day/Year
Environmental factors not influenced by risk management	Receiving surface water flow is 18000 m³/d	
	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	open systems :(Raw material delivery,Handling),(Semi-),Closed system,Indoor or outdoor use	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not specified	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Release fraction to air from process (initial release prior to RMM):	Not applicable
	AISE SPERC 2.1.j.v1. AISE SPERC 2.1.k.v1. AISE SPERC 2.1.l.v1	
	Release fraction to wastewater from process (initial release prior to RMM):	0.1 large scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.2 medium scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.4 small scale

Risk Management Measures		
	AISE SPERC 2.1.g.v1. AISE SPERC 2.1.h.v1. AISE SPERC 2.1.i.v1. (Worst case assumption)	
	Release fraction to wastewater from process (initial release prior to RMM):	0.01 large scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.1 medium scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.02 small scale
	COLIPA SPERC 2.1.a.v1. COLIPA SPERC 2.1.b.v1. COLIPA SPERC 2.1.c.v1	
	Release fraction to wastewater from process (initial release prior to RMM):	0.1 large scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.2 medium scale
	Release fraction to wastewater from process (initial release prior to RMM):	0.4 small scale
Organisation measures to prevent/limit release from site	Recycle product or dispose safely	
Conditions and measures related to sewage treatment plant	Release to municipal sewage treatment plant :	2000 m³/d
Conditions and measures related to external treatment of waste for disposal	Not applicable	
Conditions and measures related to external recovery of waste	Not applicable	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

3.2. Environment

Information for contributing exposure scenario	
2.2	AISE SPERC 2.1.j.v1,AISE SPERC 2.1.k.v1,AISE SPERC 2.1.l.v1,COLIPA SPERC 2.1.a.v1,COLIPA SPERC 2.1.b.v1,COLIPA SPERC 2.1.c.v1

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

4.1. Health

Guidance - Health	Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

4.2. Environment

Guidance - Environment	Predicted exposures are not expected to exeed the PNECs when the Risk Management Measures/Operational Conditions outlined in section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

Additional good practice advice beyond the REACH CSA

No available data

1. Exposure scenario 3.0

	Industrial use of processing aids in processes and products, not becoming part of articles	
	ES Ref.: 3.0 ES Type: Worker	

Use descriptors	SU3 PROC1, PROC2, PROC4, PROC7, PROC8b, PROC10, PROC13, PROC15, PROC17 PC25, PC35, PC37 AISE ERC 4.1v1 (AISE ERC 5.1 v1)
Processes, tasks, activities covered	Use at industrial sites (IS)
Assessment method	Used ECETOC TRA model EUSES

2. Operational conditions and risk management measures

2.1.1. Contributing scenario controlling worker exposure (PROC2, PROC8b)

Industrial use of Laundry products	
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 2	8 H/Day
	PROC 15	15 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Used in closed systems. Machine wash	
Technical conditions and measures to control dispersion from source towards the worker	Automatic dispensers. Detergents	
	Local exhaust ventilation. Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Changing of container
	Wear suitable gloves tested to EN374. ≥ Category 2	Changing of container

2.1.2. Contributing scenario controlling worker exposure (PROC4, PROC7, PROC8b, PROC10)

Industrial Use of Vehicle cleaning Products	
PROC4	Chemical production where opportunity for exposure arises
PROC7	Industrial spraying
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 4, 10	8 H/Day
	PROC 7	16 min/day
	PROC 8b	30 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
	Spraying	Whole body
Other given operational conditions affecting workers exposure	Indoor or outdoor use	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	
	Spraying. In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection APF 10x	
	Possibility of exposure to: Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.3. Contributing scenario controlling worker exposure (PROC1, PROC4, PROC7, PROC8b, PROC13)

Industrial use of food beverage and pharmaceutical products	
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC4	Chemical production where opportunity for exposure arises
PROC7	Industrial spraying
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities

Industrial use of food beverage and pharmaceutical products	
PROC13	Treatment of articles by dipping and pouring

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 1, 4, 7, 13	8 H/Day
	PROC 8b	1 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
	Spraying/fogging by machine application	Whole body
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	dipping. Spraying. undiluted product
	Wear suitable gloves tested to EN374. ≥ Category 2	dipping. Spraying. undiluted product
	In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection APF 10x	
	Possibility of exposure to: . Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.4. Contributing scenario controlling worker exposure (PROC7, PROC8b)

Industrial Use of Façade/surface Cleaning Products	
PROC7	Industrial spraying
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 8b	10 min/day
	PROC 7	8 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Outdoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	
	During spraying wear suitable respiratory equipment. Respiratory protection APF 10x	
	Possibility of exposure to: Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.5. Contributing scenario controlling worker exposure (PROC4, PROC8b)

Industrial use of Water treatment Products	
PROC4	Chemical production where opportunity for exposure arises
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 4	8 H/Day
	PROC 8b	10 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Outdoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	

Risk Management Measures		
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Transfer of substance or preparation. undiluted product
	Wear suitable gloves tested to EN374. ≥ Category 2	Transfer of substance or preparation. undiluted product

2.1.6. Contributing scenario controlling worker exposure (PROC2, PROC4, PROC8b, PROC10, PROC17)

Industrial use of Metal Treatment Products	
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC4	Chemical production where opportunity for exposure arises
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing
PROC17	Lubrication at high energy conditions in metal working operations

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 2, 4, 10, 17	8 H/Day
	PROC 8b	1 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
	Metal machining operations	Whole body
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	
	Metal machining operations	Handle behind protective shield

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Local exhaust ventilation - efficiency of at least	90
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	≥ Wear suitable gloves tested to EN374 2	

Risk Management Measures		
	Possibility of exposure to: Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.7. Contributing scenario controlling worker exposure (PROC15)

Industrial use of Quality control	
PROC15	Use as laboratory reagent

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	≤30% Aqueous solution.

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 15	40 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	

2.2. Contributing scenario controlling environmental exposure

AISE ERC 4.1v1 and 5.1v1

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution.

Operational conditions		
Frequency and duration of use	Continuous use/release	
Environmental factors not influenced by risk management	Receiving surface water flow is 18000 m³/d	
	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Not specified	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not specified	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Release fraction to air from process (initial release prior to RMM):	Not applicable
	Release fraction to wastewater from process (initial release prior to RMM): (spERC 4.1)	100 % (spERC 5.1: Worst case assumption)
	Release fraction to wastewater from process (initial release prior to RMM): (spERC 5.1)	
Organisation measures to prevent/limit release from site	Not specified	
Conditions and measures related to sewage treatment plant	Release to municipal sewage treatment plant :	2000 m^3/d
Conditions and measures related to external treatment of waste for disposal	Not applicable	
Conditions and measures related to external recovery of waste	Not applicable	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1.1	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.2	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.3	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.4	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.5	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.6	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.7	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

3.2. Environment

Information for contributing exposure scenario	
2.2	AISE SPERC 2.1.j.v1,AISE SPERC 2.1.k.v1,AISE SPERC 2.1.l.v1,COLIPA SPERC 2.1.a.v1,COLIPA SPERC 2.1.b.v1,COLIPA SPERC 2.1.c.v1

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

4.1. Health

Guidance - Health	Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

4.2. Environment

Guidance - Environment	Predicted exposures are not expected to exeed the PNECs when the Risk Management Measures/Operational Conditions outlined in section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

Additional good practice advice beyond the REACH CSA

No available data

1. Exposure scenario 4.0

	Wide dispersive use	
	ES Ref.: 4.0 ES Type: Worker	

Use descriptors	SU22 PROC1, PROC2, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15 PC21, PC31, PC35, PC39 ERC8a
Processes, tasks, activities covered	Widespread use by professional workers (PW)
Assessment method	Used ECETOC TRA model EUSES

2. Operational conditions and risk management measures

2.1.1. Contributing scenario controlling worker exposure (PROC1, PROC4, PROC8a, PROC10, PROC11)

Professional use of Laundry products	
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC4	Chemical production where opportunity for exposure arises
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 1	8 H/Day
	PROC 4	15 min/day
	PROC 8a, 11	20 min/day
	PROC 10	400 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Used in closed systems. Machine wash	
Technical conditions and measures to control dispersion from source towards the worker	Used in closed systems. Machine wash	
	Automatic dispensers. Detergents	
	Local exhaust ventilation. Not required	

Risk Management Measures		
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Changing of container
	Wear suitable gloves tested to EN374. ≥ Category 2	Changing of container

2.1.2. Contributing scenario controlling worker exposure (PROC1, PROC2, PROC8a, PROC8b, PROC10)

Professional Use of Dishwash products	
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 1, 2	8 H/Day
	PROC 8a	15 min/day
	PROC 8b	5 min/day
	PROC 10	4 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Used in closed systems. Machine wash	
	Local exhaust ventilation. Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Changing of container
	Wear suitable gloves tested to EN374. ≥ Category 2	Changing of container

2.1.3. Contributing scenario controlling worker exposure (PROC8a, PROC10, PROC11, PROC13)

Professional Use of General surface cleaning products	
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 8a	16 min/day
	PROC 10	8 H/Day
	PROC 11	40 min/day
	PROC 8	8 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	

2.1.4. Contributing scenario controlling worker exposure (PROC8a, PROC10, PROC11)

Professional Use of Floor care products	
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 8a	16 min/day
	PROC 10	8 H/Day
	PROC 11	40 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Changing of container
	Wear suitable gloves tested to EN374. ≥ Category 2	Changing of container
	Wear suitable gloves tested to EN374. ≥ Category 2	In case of repeated or prolonged contact wear gloves. Floor cleaning (liquids)

2.1.5. Contributing scenario controlling worker exposure (PROC2, PROC8b, PROC10, PROC11, PROC13)

Professional Use of Maintenance Products	
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 2, 10	8 H/Day
	PROC 8b	40 min/day
	PROC 11	10 min/day
	PROC 13	5 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
	Indoor use	

Operational conditions		
Other given operational conditions affecting workers exposure	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	Drain openers. Transfer of substance or preparation into small containers
	Wear suitable gloves tested to EN374. ≥ Category 2	Drain openers. Transfer of substance or preparation into small containers

2.1.6. Contributing scenario controlling worker exposure (PROC4, PROC8a, PROC10, PROC11)

Professional Use of Vehicle cleaning Products	
PROC4	Chemical production where opportunity for exposure arises
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 4, 10	8 H/Day
	PROC 8a	30 min/day
	PROC 11	40 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
	Spraying	Whole body
Other given operational conditions affecting workers exposure	Indoor or outdoor use	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
	Ensure operatives are trained to minimise exposures	

Risk Management Measures		
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	
	Spraying. In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection APF 10x	
	Possibility of exposure to: . Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.7. Contributing scenario controlling worker exposure (PROC8a, PROC10)

Professional Use of Food beverage and pharmacos products AISE P808.1, P808.2	
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 8a	16 min/day
	PROC 10	8 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.8. Contributing scenario controlling worker exposure (PROC8a, PROC10, PROC11)

Professional Use of Façade/surface Cleaning Products	
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 8a	15 min/day
	PROC 10, 11	8 H/Day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor or outdoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	During spraying wear suitable respiratory equipment. Respiratory protection APF 10x	
	Wear suitable gloves tested to EN374. ≥ Category 2	
	Possibility of exposure to: . Whole body. Wear suitable coveralls to prevent exposure to the skin. Wear suitable face shield	

2.1.9. Contributing scenario controlling worker exposure (PROC1, PROC8a, PROC10, PROC11, PROC13)

Professional Use of Medical Devices	
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC13	Treatment of articles by dipping and pouring

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 1,10	8 H/Day

Operational conditions		
	PROC 8a	16 min/day
	PROC 11	40 min/day
	PROC 13	60 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	indoor	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	

2.1.10. Contributing scenario controlling worker exposure (PROC15)

Equipment cleaning and maintenance - Laboratory use	
PROC15	Use as laboratory reagent

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	not relevant	
Frequency and duration of use	PROC 15	40 min/day
Human factors not influenced by risk management	Area of skin contact	Hands and forearms
Other given operational conditions affecting workers exposure	Indoor use	
	Covers use at ambient temperatures	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not required	
Technical conditions and measures to control dispersion from source towards the worker	Not required	
Organisational measures to prevent/limit releases, dispersion and exposure	Ensure operatives are trained to minimise exposures	
	Ensure regular inspection, cleaning and maintenance of equipment and machines.	
Conditions and measures related to personal protection, hygiene and health evaluation	Use suitable eye protection	
	Wear suitable gloves tested to EN374. ≥ Category 2	

2.2. Contributing scenario controlling environmental exposure (ERC8a)

ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution.

Operational conditions		
Frequency and duration of use	Continuous use/release	
Environmental factors not influenced by risk management	Receiving surface water flow is 18000 m³/d	
	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Not specified	

Risk Management Measures		
Technical conditions and measures at process level (source) to prevent release	Not specified	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	Release fraction to air from process (initial release prior to RMM):	Not applicable
	Release fraction to wastewater from process (initial release prior to RMM):	100 %
Organisation measures to prevent/limit release from site	Not specified	
Conditions and measures related to sewage treatment plant	Release to municipal sewage treatment plant :	2000 m³/d
Conditions and measures related to external treatment of waste for disposal	Not applicable	
Conditions and measures related to external recovery of waste	Not applicable	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1.1	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.2	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.3	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.4	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.5	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Information for contributing exposure scenario	
2.1.6	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.7	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.8	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.9	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
2.1.10	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

3.2. Environment

Information for contributing exposure scenario	
2.2	EUSES

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

4.1. Health

Guidance - Health	Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

4.2. Environment

Guidance - Environment	Predicted exposures are not expected to exeed the PNECs when the Risk Management Measures/Operational Conditions outlined in section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

Additional good practice advice beyond the REACH CSA

No available data

1. Exposure scenario 5.0

Wide dispersive use	
ES Ref.: 5.0 ES Type: Consumer	

Use descriptors	SU21 PC35, PC39 ERC8a
Processes, tasks, activities covered	Consumer use (C)
Assessment method	ConsExpo v4.1 EUSES

2. Operational conditions and risk management measures

2.1.1. Contributing scenario consumer end-use (PC35, PC39)

laundry products	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	Amount used per application	200 g Powder
Frequency and duration of use	Machine wash,Exposure frequency	0.25 minutes
	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006) :	
	Machine wash,Exposure duration	365 Day/Year
	Detergent powders :	
	Detergent liquids :	
	Machine wash,Exposure duration	365 Day/Year
	Machine wash,Exposure frequency	0.75 minutes
	Hand wash,Exposure duration	104 Day/Year
	Hand wash,Exposure frequency	10 minutes
	Hand wash,Exposure duration	104 Day/Year
	Hand wash,Exposure frequency	10 minutes
	Laundry pre-treatment products :	
	Spot removers (liquid),Exposure frequency	128 Day/Year
	Spot removers (liquid),Exposure duration,(Washing)	10 minutes
	Spot removers (spray),Exposure frequency	128 Day/Year
	Spot removers (spray),Exposure duration,(Spraying)	0.05 minutes

Operational conditions		
	Spot removers (spray),Exposure duration,(Washing)	10 minutes
	Pastes,Exposure frequency	128 Day/Year
	Pastes,Exposure duration,(Washing)	10 minutes
	Fabric conditioners,Exposure duration	0.75 minutes
	Fabric conditioners,Exposure frequency	365 Day/Year
Human factors not influenced by risk management	Detergent powders	
	Machine wash	Generation/formation of dust. inhalation exposure
	Hand wash,Area of skin contact	Hands and forearms
	Detergent liquids	
	Hand wash	Hands and forearms
Other given operational conditions affecting consumers exposure	Indoor use	
	Room volume	1 m³
	Minimum room ventilation rate for handling/application (air changes per hour):	2

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Avoid repeated or prolonged skin contact	
	Wash hands thoroughly after handling. Wash hands with water and soap	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.2. Contributing scenario consumer end-use (PC35, PC39)

Dishwash product	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	Amount used per application	7 g
Frequency and duration of use	AISE REACT	
	Exposure frequency	3 t/day Default value
	Hand dishwashing liquids	
	Exposure duration	0.75 h Default value
	Machine dishwashing products	
	Exposure frequency	Not applicable
	Exposure duration	Not applicable

Operational conditions		
Human factors not influenced by risk management	Detergent powders	
	Hand wash,Area of skin contact	Hands and forearms
Other given operational conditions affecting consumers exposure	none	

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Avoid repeated or prolonged skin contact	
	Wash hands thoroughly after handling. Wash hands with water and soap	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.3. Contributing scenario consumer end-use (PC35, PC39)

Cleaners, liquids (all purpose cleaners)	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	Liquid cleaners	Dilution for use application 63g/5L. (water)
	Cleaner,Gel	63 g
	Spray cleaners	≈ 16.2 g
	Wipes	3.4 g
Frequency and duration of use	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	gel,Cleaner	104 Times per Year
	Liquid cleaners	104 Times per Year
	Spray cleaners	365 Times per Year
	Wipes	365 Times per Year
Human factors not influenced by risk management	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	Liquid cleaners	Hands and forearms
	gel formation,Cleaner	Both hands
	Spray cleaners	inhalation exposure. dermal exposure. oral exposure
	Wipes	Palm of one hand

Operational conditions		
Other given operational conditions affecting consumers exposure	none	

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Avoid repeated or prolonged skin contact	
	Wash hands thoroughly after handling. Wash hands with water and soap	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.4. Contributing scenario consumer end-use (PC35, PC39)

Sanitary cleaner. Manual process	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 10 %

Operational conditions		
Amounts used	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	Bathroom cleaning (spray)	35 g
	Bathroom cleaning (liquid)	44 g
	Toilet cleaners (acid)	55 g
	Toilet cleaners (bleach)	80 g
	Toilet rim cleaners (solid)	70 g
Frequency and duration of use	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	Bathroom cleaning (spray),Exposure frequency	1 Times per week
	Bathroom cleaning (liquid),Exposure frequency,(containing acids)	4 Times per Year
	Bathroom cleaning (spray),Exposure duration	1.5 minutes
	Toilet cleaners (acid),Exposure duration	2 minutes
	Toilet cleaners (acid),Exposure frequency	260 Times per Year
	Toilet cleaners (bleach),Exposure frequency	120 Times per Year
	Toilet cleaners (bleach),Exposure duration	3 minutes
	Toilet rim cleaners (solid),Exposure frequency	10 uses per day
	Toilet rim cleaners (solid),Exposure duration	5 minutes
Human factors not influenced by risk management	Bathroom cleaning,Spray cleaners	inhalation exposure. dermal exposure. oral exposure

Operational conditions		
	Bathroom cleaning,Liquid cleaners	dermal exposure
	Toilet cleaners	dermal exposure
	Toilet rim cleaners (liquid),Toilet rim cleaners (solid)	inhalation exposure
Other given operational conditions affecting consumers exposure	spray application	6.4 m² application area. estimated (ConsExpo)
	Liquid cleaners	6.4 m² application area. estimated (ConsExpo)

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Wash hands thoroughly after handling. Wash hands with water and soap	
	Avoid repeated or prolonged skin contact	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.5. Contributing scenario consumer end-use (PC35, PC39)

Floor cleaner. Manual process	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution, Limit the substance in product to 15 %

Operational conditions		
Amounts used	Carpet cleaning (liquids)	0.5 l
	Carpet powders	2200 g
	Carpet spray spot removers	4 g
	Floor cleaning (liquids)	250 g
Frequency and duration of use	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	Carpet cleaning (liquids),Exposure frequency	0.5 Times per Year
	Carpet powders,Exposure frequency	0.5 Times per Year
	Carpet spray spot removers	10 Times per Year
	Floor cleaning (liquids),Exposure frequency	104 Times per Year
	Floor cleaning (liquids),Exposure duration	30 minutes dermal.
	Floor cleaning (liquids),Exposure duration	4 h Inhalation

Operational conditions		
	Carpet powders,Exposure duration	22 minutes
	Carpet cleaning (liquids),Exposure duration	110 minutes
Human factors not influenced by risk management	Carpet cleaning (liquids)	Both hands
	Carpet powders	dermal exposure. oral exposure
	Carpet spray spot removers	Not applicable
	Floor cleaning (liquids)	Hands and forearms. inhalation exposure
Other given operational conditions affecting consumers exposure	Carpet cleaning (liquids)	22 m² application area
	Carpet powders	22 m² application area
	Floor cleaning (liquids)	22 m² application area

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Avoid repeated or prolonged skin contact	
	Wash hands thoroughly after handling. Wash hands with water and soap	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.1.6. Contributing scenario consumer end-use (PC35, PC39)

Oven cleaners	
PC35	Washing and cleaning products
PC39	Cosmetics, personal care products

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	≤ 10 %
	Aqueous solution.

Operational conditions		
Amounts used	Amounts used	24 g
Frequency and duration of use	Cleaning Products Fact Sheet, Report No. 320104003/2006 RIVM (2006)	
	Exposure frequency	26 Times per Year
Human factors not influenced by risk management	Oven cleaners	oral exposure. inhalation exposure. dermal exposure
Other given operational conditions affecting consumers exposure	spray application	0.9 m²

Risk Management Measures		
Conditions and measures related to information and behavioural advice to consumers	Wash hands thoroughly after handling. Wash hands with water and soap	

Risk Management Measures		
	Avoid repeated or prolonged skin contact	
Conditions and measures related to personal protection, hygiene and health evaluation	Not required	

2.2. Contributing scenario controlling environmental exposure (ERC8a)

Wide dispersive use	
ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Product characteristics	
Physical form of product	Solid, Liquid
Concentration of substance in product	Aqueous solution.

Operational conditions		
Frequency and duration of use	Continuous use/release	
Environmental factors not influenced by risk management	Receiving surface water flow is 18000 m³/d	
	Local freshwater dilution factor:	10
	Local marine water dilution factor:	100
Other given operational conditions affecting environmental exposure	Not specified	

Risk Management Measures		
Conditions and measures related to sewage treatment plant	Assumed domestic sewage treatment plant flow	2000
Conditions and measures related to external treatment of waste for disposal	Not applicable	
Conditions and measures related to external recovery of waste	Not applicable	

3. Exposure estimation and reference to its source

3.1. Health

Information for contributing exposure scenario	
2.1.1	AISE REACT,Consexpo v4.1,ConsExpo v4.1
2.1.2	AISE REACT,Consexpo v4.1
2.1.3	Consexpo v4.1,ConsExpo v4.1
2.1.4	Consexpo v4.1,ConsExpo v4.1
2.1.5	Consexpo v4.1,ConsExpo v4.1
2.1.6	Consexpo v4.1,ConsExpo v4.1

3.2. Environment

Information for contributing exposure scenario	
2.2	EUSES

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

4.1. Health

Guidance - Health	Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented

4.2. Environment

Guidance - Environment	Predicted exposures are not expected to exeed the PNECs when the Risk Management Measures/Operational Conditions outlined in section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels

Additional good practice advice beyond the REACH CSA

No available data