BYKETOL-SPECIAL

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

1.1 Product identifier

Trade name	:	BYKETOL-SPECIAL
UFI	:	0ND7-801E-500P-J037
Product code	:	000000000000101435

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

Use of the Substance/Mixture	:	Leveling Additive

1.3 Details of the supplier of the safety data sheet

Company	:	BYK-Chemie GmbH Abelstrasse 45 46483 Wesel
Telephone	:	+49 281 670-0
Telefax	:	+49 281 65735
Information	:	Regulatory Affairs
Telephone	:	+49 281 670-23532
Telefax	:	+49 281 670-23533
E-mail address	:	GHS.BYK@altana.com

1.4 Emergency telephone number

+44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Hazardous components which must be listed on the label:

- 64742-95-6 Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Combination of high boiling aromatics, ketones, esters and a polydimethylsiloxane

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha - unspecified	64742-95-6 01-2119455851-35	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 50 - <= 100
2,6-dimethylheptan-4-one	108-83-8 203-620-1 01-2119474441-41	Flam. Liq. 3; H226 STOT SE 3; H335 (Respiratory system) --- specific concentration limit STOT SE 3; H335 >= 10 %	>= 10 - < 12,5
ethyl lactate	97-64-3 202-598-0 01-2119516234-49	Flam. Liq. 3; H226 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)	>= 1 - < 3
butyl glycollate	7397-62-8 230-991-7 01-2119514685-36	Eye Dam. 1; H318 Repr. 2; H361	>= 1 - < 3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed	:	Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	No information available.
Risks	:	No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment.

Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2,6-dimethylheptan-4-one	108-83-8	OELV - 8 hrs (TWA)	25 ppm 150 mg/m3	IE OEL

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	Workers	Skin contact	Long-term exposure, Systemic effects	25 mg/kg
	Workers	Inhalation	Long-term exposure, Systemic effects	150 mg/m3
	Consumers	Skin contact	Long-term exposure, Systemic effects	11 mg/kg
	Consumers	Inhalation	Long-term exposure, Systemic effects	32 mg/m3
	Consumers	Ingestion	Long-term exposure, Systemic effects	11 mg/kg
2,6-dimethylheptan-4-one	Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term local effects	290 mg/m3
	Workers	Skin contact	Long-term systemic effects	80 mg/kg
	Workers	Inhalation	Long-term systemic effects	479 mg/m3
	Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term local effects	145 mg/m3
	Consumers	Skin contact	Long-term systemic effects	28,5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	171 mg/kg
	Consumers	Ingestion	Long-term systemic effects	7,14 mg/kg
ethyl lactate	Workers	Inhalation	Short-term exposure	90 mg/m3
	Workers	Inhalation	Long-term exposure	1,6 mg/m3
	Consumers	Inhalation	Short-term exposure	54 mg/m3
	Consumers	Inhalation	Long-term exposure	6 mg/m3
butyl glycollate	Workers	Skin contact	Long-term systemic effects	34,7 mg/kg
	Workers	Inhalation	Long-term systemic	21,2 mg/m3

			effects	
	Consumers	Ingestion	Long-term systemic effects	2 mg/kg
	Consumers	Skin contact	Long-term systemic effects	20,8 mg/kg
	Consumers	Skin contact	Long-term local effects	0,28 mg/kg
	Consumers	Inhalation	Long-term systemic effects, Long-term local effects	43,5 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2,6-dimethylheptan-4-one	Fresh water	0,03 mg/l
	Marine water	0,003 mg/l
	Intermittent releases	0,3 mg/l
	Fresh water sediment	0,46 mg/kg
	Marine sediment	0,046 mg/kg
	Sewage treatment plant	2,55 mg/l
	Soil	0,0746 mg/kg
ethyl lactate	Fresh water	3,2 mg/l
butyl glycollate	Fresh water	0,05 mg/l
	Soil	0,0112 mg/kg
	Fresh water sediment	0,203 mg/kg
	Sewage treatment plant	232 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection
Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0,5 mm

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Environmental exposure controls

General advice : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour	:	colourless
Odour	:	not significant
Odour Threshold	:	No data available
Melting point/freezing point	:	< 0 °C Method: derived
Initial boiling point and boiling range	:	154,00 °C Method: derived
Upper explosion limit / Upper flammability limit	:	7,50 %(V)
Lower explosion limit / Lower flammability limit	:	1,00 %(V)
Flash point	:	43,00 °C Method: 48 (Abel-Pensky) DIN 51755
Auto-ignition temperature	:	> 200 °C Method: DIN 51794
Decomposition temperature	:	No data available
pH	:	7 (20 °C) Concentration: 1 % Method: Universal pH-value indicator
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	1,000 mm2/s (20,00 °C) 1,000 mm2/s (40,00 °C)
Solubility(ies)		
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	5 hPa (20,00 °C) Method: derived
Relative density	:	No data available
Density	:	0,8700 g/cm3 (20,00 °C) Method: 4 (20°C oscillating U-tube)
Bulk density	:	Not applicable
Relative vapour density	:	No data available

9.2 Other information

Flammability (liquids)	:	Sustains combustion
Evaporation rate	:	No data available
Surface tension	:	< 25,00 mN/m, ring dynamometer

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat): 3.990,000000 mg/kg Method: OECD Test Guideline 401

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 3.160 mg/kg Method: OECD Test Guideline 402

2,6-dimethylheptan-4-one:

Acute oral toxicity	:	LD50 (Rat): > 2.000 mg/kg

Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 14 mg/l
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: no

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

ethyl lactate:

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5,4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

Skin corrosion/irritation

Product:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

2,6-dimethylheptan-4-one:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

butyl glycollate:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes

Serious eye damage/eye irritation

Product:

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
Remarks	:	Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes

2,6-dimethylheptan-4-one:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	no

butyl glycollate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Risk of serious damage to eyes.
GLP	:	yes

Respiratory or skin sensitisation

Product:

Remarks	:	No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Test Type	:	Maximisation Test
Exposure routes	:	Dermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.

2,6-dimethylheptan-4-one:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

GLP : yes

butyl glycollate:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
GLP : yes

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Germ cell mutagenicity- Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Carcinogenicity

Product:

Remarks : No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Carcinogenicity - Assessment : Classified based on benzene content < 0.1% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note P)

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

STOT - single exposure

Product:

Remarks : No data available

STOT - repeated exposure

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Aspiration toxicity

Product:

No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Toxicity to fish : LL50 (Fish): 9,2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3,2 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata): 2,6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes

2,6-dimethylheptan-4-one:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 30 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 37,2 mg/l Exposure time: 48 h Test Type: semi-static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	(Pseudokirchneriella subcapitata (green algae)): 46,9 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes

ethyl lactate:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 320 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 683 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata): 2.300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Components:

Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

Biodegradability	:	Result: Readily biodegradable.

Method: OECD Test Guideline 301F

2,6-dimethylheptan-4-one:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D
GLP: no

butyl glycollate:

Biodegradability : Test Type: aerobic
Result: Readily biodegradable.
Method: OECD Test Guideline 301B
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1993

RID : UN 1993

IMDG : UN 1993

IATA : UN 1993

14.2 UN proper shipping name

ADR : FLAMMABLE LIQUID, N.O.S.
(Solvent naphtha, Diisobutyl ketone)

RID : FLAMMABLE LIQUID, N.O.S.
(Solvent naphtha, Diisobutyl ketone)

IMDG : FLAMMABLE LIQUID, N.O.S.
(SOLVENT NAPHTHA, Diisobutyl ketone)

IATA : Flammable liquid, n.o.s.
(Solvent naphtha, Diisobutyl ketone)

14.3 Transport hazard class(es)

ADR : 3

RID : 3

IMDG : 3

IATA : 3

14.4 Packing group

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : D/E

RID
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

IMDG
Packing group : III

Labels	:	3
EmS Code	:	F-E, S-E
Remarks	:	IMDG Code segregation group - none

IATA (Cargo)

Packing instruction (cargo aircraft)	:	366
Packing group	:	III
Labels	:	Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft)	:	355
Packing instruction (LQ)	:	Y344
Packing group	:	III
Labels	:	Flammable Liquids

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75, 3 If you intend to use this product as tattoo ink, please contact your vendor.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the	E2	ENVIRONMENTAL HAZARDS

control of major-accident hazards involving dangerous substances.

P5c FLAMMABLE LIQUIDS

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H304	:	May be fatal if swallowed and enters airways.
H318	:	Causes serious eye damage.
H335	:	May cause respiratory irritation.
H336	:	May cause drowsiness or dizziness.
H361	:	Suspected of damaging fertility or the unborn child.
H411	:	Toxic to aquatic life with long lasting effects.
EUH066	:	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Flam. Liq.	:	Flammable liquids
Repr.	:	Reproductive toxicity
STOT SE	:	Specific target organ toxicity - single exposure
IE OEL	:	List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - Interna-

tional Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 3	H226	Based on product data or assessment
STOT SE 3	H336	Calculation method
STOT SE 3	H335	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Chronic 2	H411	Calculation method

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

IE / EN

Annex: Exposure Scenarios

Table of Contents

ES 1: Formulation & (re)packing of substances and mixtures; Industrial uses (SU3).

1.1. Title section

Exposure Scenario name	:	Formulation & (re)packing of substances and mixtures
Structured Short Title	:	Formulation & (re)packing of substances and mixtures; Industrial uses (SU3).

Environment		
CS 1	**Formulation into mixture, Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**	ERC2, ERC4
Worker		
CS 2	**Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions**	PROC1
CS 3	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions**	PROC2
CS 4	**Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition, Chemical production where opportunity for exposure arises, Mixing or blending in batch processes, Transfer of substance or mixture (charging/discharging) at non dedicated-facilities, Transfer of substance or mixture (charging/discharging) at dedicated facilities, Transfer of substance or mixture into small containers (dedicated filling line, including weighing), Tabletting, compression, extrusion, pelettisation, granulation, Use as laboratory reagent**	PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

1.2. Conditions of use affecting exposure

1.2.1. Control of environmental exposure: Formulation into mixture (ERC2) / Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	50 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	730000 kg

Release type	:	Continuous release
Emission days	:	100
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal sewage treatment plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

1.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

1.2.3. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

1.2.4. Control of worker exposure: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Chemical production where opportunity for exposure arises (PROC4) / Mixing or blending in batch processes (PROC5) / Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9) / Tabletting, compression, extrusion, pelettisation, granulation (PROC14) / Use as laboratory reagent (PROC15)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C

Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

1.3. Exposure estimation and reference to its source

1.3.1. Environmental release and exposure: Formulation into mixture (ERC2) / Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Release route	Release rate	Release estimation method
Air	10 kg/day	
Waste	0,2 kg/day	
Soil	0,1 kg/day	

1.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 2: Use in coatings; Industrial uses (SU3).

2.1. Title section

Exposure Scenario name	:	Use in coatings
Structured Short Title	:	Use in coatings; Industrial uses (SU3).

Environment		
CS 1	**Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**	ERC4
Worker		
CS 2	**Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions**	PROC1
CS 3	**Industrial spraying**	PROC7
CS 4	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions, Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition, Chemical production where opportunity for exposure arises, Mixing or blending in batch processes, Transfer of substance or mixture (charging/discharging) at non dedicated-facilities, Transfer of substance or mixture (charging/discharging) at dedicated facilities, Transfer of substance or mixture into small containers (dedicated filling line, including weighing), Roller application or brushing, Treatment of articles by dipping and pouring, Tabletting, compression, extrusion, pelettisation, granulation, Use as laboratory reagent**	PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

2.2. Conditions of use affecting exposure

2.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		

Release type	:	Continuous release
Emission days	:	300
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal Sewage Treatment Plant
STP sludge treatment	:	Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Waste treatment	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

2.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

2.2.3. Control of worker exposure: Industrial spraying (PROC7)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Conditions and measures related to personal protection, hygiene and health evaluation		
Wear a respirator conforming to EN140.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.

2.2.4. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2) / Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Chemical production where opportunity for exposure arises (PROC4) / Mixing or blending in batch processes (PROC5) / Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9) / Roller application or brushing (PROC10) / Treatment of articles by dipping and pouring (PROC13) / Tabletting, compression, extrusion, pelettisation, granulation (PROC14) / Use as laboratory reagent (PROC15)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min

Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.

2.3. Exposure estimation and reference to its source

2.3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Release route	Release rate	Release estimation method
Air	980 kg/day	
Waste	0,7 kg/day	
Soil	0 kg/day	

2.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 3: Use in coatings; Professional uses (SU22).

3.1. Title section

Exposure Scenario name	:	Use in coatings
Structured Short Title	:	Use in coatings; Professional uses (SU22).

Environment		
CS 1	**Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor), Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)**	ERC8a, ERC8d
Worker		
CS 2	**Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions**	PROC1
CS 3	**Non-industrial spraying**	PROC11
CS 4	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions, Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition, Chemical production where opportunity for exposure arises, Mixing or blending in batch processes, Transfer of substance or mixture (charging/discharging) at non dedicated-facilities, Transfer of substance or mixture (charging/discharging) at dedicated facilities, Roller application or brushing, Treatment of articles by dipping and pouring, Use as laboratory reagent, Manual activities involving hand contact**	PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC13, PROC15, PROC19

3.2. Conditions of use affecting exposure

3.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C

3.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.

3.2.3. Control of worker exposure: Non-industrial spraying (PROC11)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Handle in a fume cupboard or under extract ventilation.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.

3.2.4. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2) / Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Chemical production where opportunity for exposure arises (PROC4) / Mixing or blending in batch processes (PROC5) / Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Roller application or brushing (PROC10) / Treatment of articles by dipping and pouring (PROC13) / Use as laboratory reagent (PROC15) / Manual activities involving hand contact (PROC19)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.

3.3. Exposure estimation and reference to its source

3.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a) / Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Release route	Release rate	Release estimation method
Air	980 kg/day	
Waste	10 kg/day	
Soil	10 kg/day	

3.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 4: Cleaning; Industrial uses (SU3).

4.1. Title section

Exposure Scenario name	:	Cleaning
Structured Short Title	:	Cleaning; Industrial uses (SU3).

Environment		
CS 1	**Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**	ERC4
Worker		
CS 2	**Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions**	PROC1
CS 3	**Industrial spraying**	PROC7
CS 4	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions, Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition, Chemical production where opportunity for exposure arises, Transfer of substance or mixture (charging/discharging) at non dedicated-facilities, Transfer of substance or mixture (charging/discharging) at dedicated facilities, Roller application or brushing, Treatment of articles by dipping and pouring**	PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC13

4.2. Conditions of use affecting exposure

4.2.1. Control of environmental exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	100000 kg
Release type	:	Continuous release
Emission days	:	20

Conditions and measures related to sewage treatment plant		
STP type	:	Municipal Sewage Treatment Plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	1.000

4.2.2. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

4.2.3. Control of worker exposure: Industrial spraying (PROC7)

Product (article) characteristics		
Covers concentrations up to 5 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

4.2.4. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2) / Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Chemical production where opportunity for exposure arises (PROC4) / Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Roller application or brushing (PROC10) / Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week

Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

4.3. Exposure estimation and reference to its source

4.3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Release route	Release rate	Release estimation method
Air	1.000 kg/day	
Waste	0,003 kg/day	
Soil	0 kg/day	

4.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 5: Cleaning; Professional uses (SU22).

5.1. Title section

Exposure Scenario name	:	Cleaning
Structured Short Title	:	Cleaning; Professional uses (SU22).

Environment		
CS 1	**Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)**	ERC8a
CS 2	**Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)**	ERC8d
Worker		
CS 3	**Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions**	PROC1
CS 4	**Transfer of substance or mixture (charging/discharging) at non dedicated-facilities**	PROC8a
CS 5	**Roller application or brushing**	PROC10
CS 6	**Non-industrial spraying**	PROC11
CS 7	**Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions, Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition, Chemical production where opportunity for exposure arises, Transfer of substance or mixture (charging/discharging) at dedicated facilities, Treatment of articles by dipping and pouring**	PROC2, PROC3, PROC4, PROC8b, PROC13

5.2. Conditions of use affecting exposure

5.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C

Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	1000000 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal Sewage Treatment Plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

5.2.2. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	1000000 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal Sewage Treatment Plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

5.2.3. Control of worker exposure: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Technical and organisational conditions and measures		
Store substance within a closed system.		
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

5.2.4. Control of worker exposure: Transfer of substance or mixture (charging/discharging) at non dedicated-facilities (PROC8a)

Product (article) characteristics		
Covers concentrations up to 100 %		

Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	240 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

5.2.5. Control of worker exposure: Roller application or brushing (PROC10)

Product (article) characteristics		
Covers concentrations up to 25 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

5.2.6. Control of worker exposure: Non-industrial spraying (PROC11)

Product (article) characteristics		
Covers concentrations up to 1 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C

Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

5.2.7. Control of worker exposure: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2) / Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3) / Chemical production where opportunity for exposure arises (PROC4) / Transfer of substance or mixture (charging/discharging) at dedicated facilities (PROC8b) / Treatment of articles by dipping and pouring (PROC13)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	5 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

5.3. Exposure estimation and reference to its source

5.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Release route	Release rate	Release estimation method
Air	20 kg/day	
Waste	0,001 kg/day	
Soil	0 kg/day	

5.3.2. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Release route	Release rate	Release estimation method
Air	20 kg/day	
Waste	0,001 kg/day	
Soil	0 kg/day	

5.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 6: Use in laboratories; Industrial uses (SU3).

6.1. Title section

Exposure Scenario name	:	Use in laboratories
Structured Short Title	:	Use in laboratories; Industrial uses (SU3).

Environment		
CS 1	**Formulation into mixture, Use of non-reactive processing aid at industrial site (no inclusion into or onto article)**	ERC2, ERC4
Worker		
CS 2	**Roller application or brushing, Use as laboratory reagent**	PROC10, PROC15

6.2. Conditions of use affecting exposure

6.2.1. Control of environmental exposure: Formulation into mixture (ERC2) / Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	50 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	730000 kg
Release type	:	Continuous release
Emission days	:	100
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal sewage treatment plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

	External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure	
Local freshwater dilution factor	: 10
Local marine water dilution factor	: 100

6.2.2. Control of worker exposure: Roller application or brushing (PROC10) / Use as laboratory reagent (PROC15)

Product (article) characteristics	
Covers concentrations up to 100 %	
Physical form of product	: Liquid
Vapour pressure	: 10 hPa
Temperature	: 20 °C
Amount used (or contained in articles), frequency and duration of use/exposure	
Duration	: 480 min
Use frequency	: 5 days per week
Other conditions affecting workers exposure	
Temperature	: Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply	
Assumes a good basic standard of occupational hygiene is implemented	

6.3. Exposure estimation and reference to its source

6.3.1. Environmental release and exposure: Formulation into mixture (ERC2) / Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)

Release route	Release rate	Release estimation method
Air	10 kg/day	
Waste	0,2 kg/day	
Soil	0,1 kg/day	

6.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 7: Use in laboratories; Professional uses (SU22).

7.1. Title section

Exposure Scenario name	:	Use in laboratories
Structured Short Title	:	Use in laboratories; Professional uses (SU22).

Environment		
CS 1	**Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)**	ERC8a
Worker		
CS 2	**Roller application or brushing, Use as laboratory reagent**	PROC10, PROC15

7.2. Conditions of use affecting exposure

7.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	1 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to sewage treatment plant		
STP type	:	Municipal Sewage Treatment Plant
STP sludge treatment	:	No application of sewage sludge to soil Sewage sludge should be incinerated, contained or reclaimed.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10

Local marine water dilution factor	:	100

7.2.2. Control of worker exposure: Roller application or brushing (PROC10) / Use as laboratory reagent (PROC15)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Duration	:	480 min
Use frequency	:	5 days per week
Other conditions affecting workers exposure		
Temperature	:	Assumes use at not more than 20°C above ambient temperature.
Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply		
Assumes a good basic standard of occupational hygiene is implemented		

7.3. Exposure estimation and reference to its source

7.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Release route	Release rate	Release estimation method
Air	0,01 kg/day	
Waste	0,01 kg/day	
Soil	0 kg/day	

7.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 8: Cleaning; Consumer uses (SU21).

8.1. Title section

Exposure Scenario name	:	Cleaning
Structured Short Title	:	Cleaning; Consumer uses (SU21).

Environment		
CS 1	**Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)**	ERC8a
CS 2	**Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)**	ERC8d
Consumer		
CS 3	Air care products	PC3
CS 4	Coatings and paints, thinners, paint removers	PC9a
CS 5	Coatings and paints, thinners, paint removers	PC9a
CS 6	Washing and cleaning products (including solvent based products)	PC35
CS 7	Coatings and paints, thinners, paint removers	PC9a
CS 8	Washing and cleaning products	PC35
CS 9	Washing and cleaning products (including solvent based products)	PC35
CS 10	Washing and cleaning products (including solvent based products)	PC35

8.2. Conditions of use affecting exposure

8.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	2,6 kg
Release type	:	Continuous release

Emission days	:	365
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

8.2.2. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	2,6 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

8.2.3. Control of consumer exposure: Air care products (PC3)

Air care, continuous action (solid and liquid) (PC3_2)

Product (article) characteristics		
Covers concentrations up to 10 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	0,48 g/event
Duration	:	480 min
Use frequency	:	365 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.4. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Waterborne latex wall paint (PC9a_1, PC15_1)

Product (article) characteristics		
Covers concentrations up to 1 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	2,760 kg
Duration	:	132 min
Use frequency	:	4 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.5. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Solvent rich, high solid, water borne paint (PC9a_2, PC15_2)

Product (article) characteristics		
Covers concentrations up to 27,5 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	0,744 kg
Duration	:	132 min
Use frequency	:	6 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.6. Control of consumer exposure: Washing and cleaning products (including solvent based products) (PC35)

Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) (PC8_2, PC35_2)

Product (article) characteristics		
Covers concentrations up to 50 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	0,215 kg
Duration	:	19,8 min
Use frequency	:	2 days per year
Other conditions affecting consumers exposure		
Room size	:	24 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.7. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Removers (paint-, glue-, wall paper-, sealant-remover) (PC9a_4, PC15_4)

Product (article) characteristics		
Covers concentrations up to 50 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	0,491 kg
Duration	:	120 min
Use frequency	:	3 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.8. Control of consumer exposure: Washing and cleaning products (PC35)

Laundry and dish washing products (PC35_1, PC8_1)

Product (article) characteristics		
Covers concentrations up to 5 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	15 g/event
Duration	:	30 min
Use frequency	:	365 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3

8.2.9. Control of consumer exposure: Washing and cleaning products (including solvent based products) (PC35)

Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) (PC8_2, PC35_2)

Product (article) characteristics		
Covers concentrations up to 5 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	27 g/event
Duration	:	19,8 min
Use frequency	:	128 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.2.10. Control of consumer exposure: Washing and cleaning products (including solvent based products) (PC35)

Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) (PC8_3, PC35_3)

Product (article) characteristics		
Covers concentrations up to 15 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	35 g/event
Duration	:	10,2 min
Use frequency	:	128 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

8.3. Exposure estimation and reference to its source

8.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Release route	Release rate	Release estimation method
Air	950 kg/day	
Waste	25 kg/day	
Soil	25 kg/day	

8.3.2. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Release route	Release rate	Release estimation method
Air	950 kg/day	
Waste	25 kg/day	
Soil	25 kg/day	

8.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
For scaling see
http://www.ecetoc.org/tra

Further details on scaling and control technologies are provided in SPERC factsheet.

ES 9: Use in coatings; Consumer uses (SU21).

9.1. Title section

Exposure Scenario name	:	Use in coatings
Structured Short Title	:	Use in coatings; Consumer uses (SU21).

Environment		
CS 1	**Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)**	ERC8a
CS 2	**Wide dispersive indoor use of reactive substances in open systems**	ERC8b
Consumer		
CS 3	Adhesives, sealants	PC1
CS 4	Coatings and paints, thinners, paint removers	PC9a

9.2. Conditions of use affecting exposure

9.2.1. Control of environmental exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	130 kg
Daily amount per site	:	370 kg
Regional use tonnage	:	270000 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with

		applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

9.2.2. Control of environmental exposure: Wide dispersive indoor use of reactive substances in open systems (ERC8b)

Product (article) characteristics		
Covers concentrations up to 100 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Annual amount per site	:	130 kg
Daily amount per site	:	370 kg
Regional use tonnage	:	270000 kg
Release type	:	Continuous release
Emission days	:	365
Conditions and measures related to treatment of waste (including article waste)		
Waste treatment	:	External treatment and disposal of waste should comply with applicable local and/or national regulations. External recovery and recycling of waste should comply with applicable local and/or national regulations.
Other conditions affecting environmental exposure		
Local freshwater dilution factor	:	10
Local marine water dilution factor	:	100

9.2.3. Control of consumer exposure: Adhesives, sealants (PC1)

Glues, hobby use (PC1_1)

Product (article) characteristics		
Covers concentrations up to 30 %		
Physical form of product	:	Liquid

Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	9 g/event
Duration	:	240 min
Use frequency	:	365 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

9.2.4. Control of consumer exposure: Coatings and paints, thinners, paint removers (PC9a)

Product (article) characteristics		
Covers concentrations up to 50 %		
Physical form of product	:	Liquid
Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	0,491 kg
Duration	:	120 min
Use frequency	:	3 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

9.2.5. Control of consumer exposure:

Plasters and floor equalizers (PC9b_2)
Fillers and putty (PC9b_1)

Product (article) characteristics		
Covers concentrations up to 2 %		
Physical form of product	:	Liquid

Vapour pressure	:	10 hPa
Temperature	:	20 °C
Amount used (or contained in articles), frequency and duration of use/exposure		
Amount used per event	:	13,8 kg
Duration	:	120 min
Use frequency	:	12 days per year
Other conditions affecting consumers exposure		
Room size	:	20 m3
Ventilation rate	:	Covers use under typical household ventilation.

9.3. Exposure estimation and reference to its source

9.3.1. Environmental release and exposure: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)

Release route	Release rate	Release estimation method
Air	985 kg/day	
Waste	10 kg/day	
Soil	5 kg/day	

9.3.2. Environmental release and exposure: Wide dispersive indoor use of reactive substances in open systems (ERC8b)

Release route	Release rate	Release estimation method
Air	985 kg/day	
Waste	10 kg/day	
Soil	5 kg/day	

9.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.
http://www.ecetoc.org/tra
For scaling see

Further details on scaling and control technologies are provided in SPERC factsheet.