

Safety Data Sheet dated 6/2/2023, version 14

SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1. Product identifier Mixture identification: Trade name: WIZZY PULISCI PLASTICA Trade code: 1934 1.2. Relevant identified uses of the substance or mixture and uses advised against Recommended use: cloth impregnated with plastic detergent 1.3. Details of the supplier of the safety data sheet Supplier: Arexons S.p.A. via Antica di Cassano, 23, 20063 Cernusco sul Naviglio (MI), Italy Arexons S.p.A. Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306 Competent person responsible for the safety data sheet: arexons@arexons.it 1.4. Emergency telephone number Arexons S.p.A. Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306 In England and Wales: NHS 111 - dial 111 In Scotland: NHS 24 - dial 111 In Ireland: Beaumont Hospital - National Poisons Information Centre 01 809 2166 (7days, 8:00 -22:00) In South Africa: Poison Information Helpline 0861 555 777 In Malta: emergency number 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP):

♦ Warning, Skin Sens. 1A, May cause an allergic skin reaction.
Adverse physicochemical, human health and environmental effects:
No other hazards
2.2. Label elements
Hazard pictograms:



Warning Hazard statements:

H317 May cause an allergic skin reaction.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P280 Wear protective gloves/clothing and eye/face protection.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

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EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

Contains

2-Methyl-2H-isothiazol-3-one

Special provisions according to Annex XVII of REACH and subsequent amendments: None

Regulation (EC) nr 648/2004 (detergents). Product contents: Non-ionic surfactants < 5 % The product also contains: Preservatives: Perfumes Laurylamine Dipropylenediamine, Pyridine-2-thiol 1-oxide, sodium salt., 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one, 1,2benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one, 2-Methyl-2Hisothiazol-3-one

2.3. Other hazards

PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%:

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

- 3.1. Substances
 - N.A.
- 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

>= 1% - < 2% ethanediol; ethylene glycol

>= 0.02% - < 0.05% Esadeciltrimetilaammoniocloruro

♦ 4.1/CT Aquatic Chronic T H410 M=
 ♦ 3.1/3/Dermal Acute Tox. 3 H311

♦ 4.1/A1 Aguatic Acute 1 H400 M=10.

- ♦ 3.2/1C Skin Corr. 1C H314
- ♦ 3.3/1 Eve Dam. 1 H318

♦ 3.1/4/Oral Acute Tox. 4 H302

>= 0.005% - < 0.01% 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one Index number: 613-088-00-6, CAS: 2634-33-5, EC: 220-120-9

3.1/4/Oral Acute Tox. 4 H302

3.2/2 Skin Irrit. 2 H315

3.3/1 Eye Dam. 1 H318

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 $C \ge 0,005\%$: EUH208 $C \ge 0,05\%$: Skin Sens. 1 H317

>= 0.001% - < 0.005% octamethylcyclotetrasiloxane; [D4] 1934/14 Page n. 2 of 14



REACH No.: 01-2119529238-36, Index number: 014-018-00-1, CAS: 556-67-2, EC: 209-136-7 2.6/3 Flam. Liq. 3 H226 3.7/2 Repr. 2 H361f 4.1/C1 Aquatic Chronic 1 H410 M=10. >= 0.001% - < 0.005% DYPHENYL OXYDE REACH No.: 01-2119472545-33, CAS: 101-84-8, EC: 202-981-2 1 3.3/2 Eye Irrit. 2 H319 4.1/C2 Aquatic Chronic 2 H411 >= 0.001% - < 0.005% 2-Methyl-2H-isothiazol-3-one CAS: 2682-20-4, EC: 220-239-6 3.1/2/Inhal Acute Tox. 2 H330 ♦ 3.1/3/Dermal Acute Tox. 3 H311 3.1/3/Oral Acute Tox. 3 H301 3.2/1B Skin Corr. 1B H314 3.3/1 Eye Dam. 1 H318 1 3.4.2/1A Skin Sens. 1A H317 4.1/A1 Aquatic Acute 1 H400 M=10. 4.1/C1 Aquatic Chronic 1 H410 M=1. EUH071 Specific Concentration Limits: C >= 0,00015%: EUH208 C >= 0,0015%: Skin Sens. 1A H317 >= 0.001% - < 0.005% Pyridine-2-thiol 1-oxide, sodium salt. CAS: 3811-73-2, EC: 223-296-5 3.1/4/Oral Acute Tox. 4 H302 3.1/4/Dermal Acute Tox. 4 H312 3.1/4/Inhal Acute Tox. 4 H332 1 3.2/2 Skin Irrit. 2 H315 3.3/2 Eve Irrit. 2 H319 4.1/A1 Aquatic Acute 1 H400 M=100. 4.1/C1 Aquatic Chronic 1 H410 M=10. <1 ppb toluene REACH No.: 01-2119471310-51, CAS: 108-88-3, EC: 203-625-9 2.6/2 Flam. Liq. 2 H225 1.2/2 Skin Irrit. 2 H315 1.8/3 STOT SE 3 H336 3.10/1 Asp. Tox. 1 H304 3.7/2 Repr. 2 H361 3.9/2 STOT RE 2 H373 SVHC, PBT, vPvB, endocrine disruptor substances: >= 0.001% - < 0.005% octamethylcyclotetrasiloxane; [D4] REACH No.: 01-2119529238-36, Index number: 014-018-00-1, CAS: 556-67-2, EC:

SECTION 4: First aid measures

4.1. Description of first aid measures In case of skin contact:1934/14Page n. 3 of 14

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PBT, vPvB, SVHC



Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

- 4.2. Most important symptoms and effects, both acute and delayed None
- 4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media: To carbon dioxide. To dust. Foam Water spray. Not Recommended Extinguishing Media: Do not use direct water jets.

- 5.2. Special hazards arising from the substance or mixture Do not inhale explosion and combustion gases. Burning produces heavy smoke.
- 5.3. Advice for firefighters
 Use suitable breathing apparatus .
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures Wear personal protection equipment. Remove persons to safety.

See protective measures under point 7 and 8.

- 6.2. Environmental precautions

 Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
 Retain contaminated washing water and dispose it.
 In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
 Suitable material for taking up: absorbing material, organic, sand

 6.3. Motheds and material for containment and cleaning up.
- 6.3. Methods and material for containment and cleaning up
- Wash with plenty of water.
- 6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Avoid contact with skin and eyes, inhalation of vapours and mists. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. See also section 8 for recommended protective equipment. Advice on general occupational hygiene: Contamined clothing should be changed before entering eating areas. Do not eat or drink while working. 7.2. Conditions for safe storage, including any incompatibilities Keep away from food, drink and feed. None in particular. Instructions as regards storage premises: Adequately ventilated premises. 7.3. Specific end use(s) None in particular **SECTION 8: Exposure controls/personal protection** 8.1. Control parameters ethanediol; ethylene glycol - CAS: 107-21-1 EU - TWA(8h): 52 mg/m3, 20 ppm - STEL: 104 mg/m3, 40 ppm - Notes: Skin ACGIH - TWA(8h): 25 ppm - STEL: 50 ppm - Notes: (V), A4 - URT irr ACGIH - STEL: 10 mg/m3 - Notes: (I, H), A4 - URT irr DYPHENYL OXYDE - CAS: 101-84-8 EU - TWA(8h): 7 mg/m3, 1 ppm - STEL: 14 mg/m3, 2 ppm ACGIH - TWA(8h): 1 ppm - STEL: 2 ppm - Notes: (V) - URT and eye irr, nausea toluene - CAS: 108-88-3 EU - TWA(8h): 192 mg/m3, 50 ppm - STEL: 384 mg/m3, 100 ppm - Notes: Skin ACGIH - TWA(8h): 20 ppm - Notes: A4, BEI - Visual impair, female repro, pregnancy loss **DNEL Exposure Limit Values** Esadeciltrimetilaammoniocloruro - CAS: 112-02-7 Worker Professional: 3.32 mg/m3 - Consumer: 0.98 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects Worker Professional: 4.7 mg/kg - Consumer: 2.83 mg/kg - Exposure: Human Dermal -Frequency: Long Term, systemic effects Consumer: 2.83 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 Worker Professional: 73 mg/m3 - Consumer: 13 mg/m3 - Exposure: Human Inhalation -Frequency: Long Term, systemic effects Worker Professional: 73 mg/m3 - Consumer: 13 mg/m3 - Exposure: Human Inhalation -Frequency: Long Term, local effects Consumer: 3.7 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects DYPHENYL OXYDE - CAS: 101-84-8 Worker Industry: 59 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects Worker Industry: 58.3 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects Worker Industry: 9.68 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects Worker Industry: 14 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects **PNEC Exposure Limit Values** Esadeciltrimetilaammoniocloruro - CAS: 112-02-7 Target: Fresh Water - Value: 0.00068 mg/l Target: Marine water - Value: 0.000068 mg/l Target: Freshwater sediments - Value: 9.27 mg/kg Target: Marine water sediments - Value: 0.927 mg/kg 1934/14 Page n. 5 of 14



Target: 09 - Value: 0.4 mg/l octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 Target: Fresh Water - Value: 0.0015 mg/l Target: Marine water - Value: 0.00015 mg/l Target: Freshwater sediments - Value: 3 mg/kg Target: Marine water sediments - Value: 0.3 mg/kg Target: 09 - Value: 10 mg/l DYPHENYL OXYDE - CAS: 101-84-8 Target: Fresh Water - Value: 0.0017 mg/l Target: Marine water - Value: 0.00017 mg/l Target: Freshwater sediments - Value: 0.345 mg/kg Target: Marine water sediments - Value: 0.0345 mg/kg Target: Soil (agricultural) - Value: 0.0681 mg/kg 8.2. Exposure controls Eye protection: Eye glasses with side protection. Compliant with EN 166 Protection for skin: protective clothing Protection for hands: Nitrile or Viton gloves. Compliant with EN 374. Respiratory protection: Not needed for normal use. Thermal Hazards: None Environmental exposure controls: None Appropriate engineering controls: None

SECTION 9: Physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid		
Colour:	White		
Odour:	Characteristic		
Melting point/freezing point:	N.A.		
Boiling point or initial boiling point and boiling range:	N.A.		
Flammability:	N.A.		
Lower and upper explosion limit:	N.A.		
Flash point:	Not flammable	IP 170	
Auto-ignition temperature:	N.A.		

9.1. Information on basic physical and chemical properties

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Decomposition temperature:	N.A.		
pH:	7		
Kinematic viscosity:	N.A.		
Solubility in water:	Soluble		
Solubility in oil:	N.A.		
Partition coefficient n- octanol/water (log value):	N.A.		
Vapour pressure:	N.A.		
Density and/or relative density:	0,997 g/cm3 (impregnante)		
Relative vapour density:	N.A.		
Particle characteristics:			
Particle size:	N.A.		

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

- 10.1. Reactivity
 - Stable under normal conditions
- 10.2. Chemical stability
- Stable under normal conditions 10.3. Possibility of hazardous reactions
- None 10.4. Conditions to avoid
 - Stable under normal conditions.
- 10.5. Incompatible materials
 - None in particular.
- 10.6. Hazardous decomposition products None.

SECTION 11: Toxicological information

- 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Toxicological information of the product:
 - WIZZY PULISCI PLASTIČA
 - a) acute toxicity
 - Not classified
 - Based on available data, the classification criteria are not met
 - b) skin corrosion/irritation
 - Not classified
 - Based on available data, the classification criteria are not met
 - c) serious eye damage/irritation
 - Not classified

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Based on available data, the classification criteria are not met d) respiratory or skin sensitisation The product is classified: Skin Sens. 1A H317 e) germ cell mutagenicity Not classified Based on available data, the classification criteria are not met f) carcinogenicity Not classified Based on available data, the classification criteria are not met g) reproductive toxicity Not classified Based on available data, the classification criteria are not met h) STOT-single exposure Not classified Based on available data, the classification criteria are not met i) STOT-repeated exposure Not classified Based on available data, the classification criteria are not met j) aspiration hazard Not classified Based on available data, the classification criteria are not met Toxicological information of the main substances found in the product: Esadeciltrimetilaammoniocloruro - CAS: 112-02-7 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one - CAS: 2634-33-5 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat 1193 mg/kg Test: LD50 - Route: Skin - Species: Rat 4115 mg/kg b) skin corrosion/irritation: Test: Skin Irritant Positive c) serious eve damage/irritation: Test: Eye Corrosive Positive d) respiratory or skin sensitisation: Test: Skin Sensitization - Route: Skin Positive octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 a) acute toxicity: Test: LC50 - Route: Inhalation - Species: Rat > 36 mg/l Test: LD50 - Route: Oral - Species: Rat > 4800 mg/kg Test: LD50 - Route: Skin - Species: Rat > 2400 mg/kg DYPHENYL OXYDE - CAS: 101-84-8 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat 2830 mg/kg Test: LD50 - Route: Skin - Species: Rabbit > 7940 mg/kg 2-Methyl-2H-isothiazol-3-one - CAS: 2682-20-4 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat 120 mg/kg Test: LC50 - Route: Inhalation - Species: Rat 0.11 mg/l - Duration: 4h Test: LD50 - Route: Skin - Species: Rabbit 242 mg/kg b) skin corrosion/irritation: Test: Skin Corrosive - Route: Skin - Species: Rabbit Positive c) serious eye damage/irritation: Test: Eye Corrosive - Route: EYE - Species: Rabbit Positive d) respiratory or skin sensitisation: Test: Skin Sensitization - Route: Skin - Species: IND Positive f) carcinogenicity:

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Test: Carcinogeneticy Negative h) STOT-single exposure: Test: oecd 11 3 Pyridine-2-thiol 1-oxide, sodium salt. - CAS: 3811-73-2 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat 1.208 Test: LC50 - Route: Inhalation - Species: Rat 1.08 Test: LD50 - Route: Skin - Species: Rat 1.800 c) serious eye damage/irritation: Test: Eye Irritant Positive toluene - CAS: 108-88-3 a) acute toxicity: Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg Test: LD50 - Route: Inhalation - Species: Rat > 20 mg/l - Duration: 4h

11.2. Information on other hazards Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. Esadeciltrimetilaammoniocloruro - CAS: 112-02-7 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one - CAS: 2634-33-5 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish 2.18 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia 2.94 mg/l - Duration h: 48 Endpoint: CE6 - Species: Algae 0.11 mg/l - Duration h: 72 octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish > 0.22 mg/l - Duration h: 96 Endpoint: LC50 - Species: Fish > 0.0063 mg/l - Duration h: 336 Endpoint: EC50 - Species: Daphnia > 0.015 mg/l - Duration h: 48 b) Aquatic chronic toxicity: Endpoint: NOEC - Species: Fish > 0.0044 mg/l - Duration h: 2232 Endpoint: NOEC - Species: Daphnia 0.0079 mg/l - Duration h: 504 e) Plant toxicity: Endpoint: CE6 - Species: Algae > 0.022 mg/l - Duration h: 72 DYPHENYL OXYDE - CAS: 101-84-8 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish 4.2 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia 1.7 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae 0.455 mg/l - Duration h: 72 Endpoint: NOEC - Species: Algae 0.24 mg/l - Duration h: 72 2-Methyl-2H-isothiazol-3-one - CAS: 2682-20-4 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish 4.77 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia 0.93-1.9 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae 0.0695 mg/l - Duration h: 24 b) Aquatic chronic toxicity: Endpoint: NOEC - Species: Daphnia 0.04 mg/l - Duration h: 504 Endpoint: NOEC - Species: Fish 2.1 mg/l - Duration h: 792

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Pyridine-2-thiol 1-oxide, sodium salt. - CAS: 3811-73-2 a) Aquatic acute toxicity: Endpoint: LC50 - Species: Fish 0.0066 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia 0.022 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae 0.46 mg/l 12.2. Persistence and degradability None Esadeciltrimetilaammoniocloruro - CAS: 112-02-7 Biodegradability: Readily biodegradable 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one - CAS: 2634-33-5 Biodegradability: Readily biodegradable - Test: BIOGDG06 octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 Biodegradability: Non-readily biodegradable - Test: OECD TG 310 - Duration: 28gg - %: 3.7 2-Methyl-2H-isothiazol-3-one - CAS: 2682-20-4 Biodegradability: 4 - %: 0.38 Pyridine-2-thiol 1-oxide, sodium salt. - CAS: 3811-73-2 Biodegradability: Readily biodegradable 12.3. Bioaccumulative potential octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 Test: BCF - Bioconcentrantion factor 12400 Test: log Pow 6.49 Pyridine-2-thiol 1-oxide, sodium salt. - CAS: 3811-73-2 Test: log Pow -3.8 toluene - CAS: 108-88-3 Bioaccumulation: Bioaccumulative - Test: BCF - Bioconcentrantion factor 90 12.4. Mobility in soil N.A. 12.5. Results of PBT and vPvB assessment **PBT Substances:** >= 0.001% - < 0.005% octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 vPvB Substances: >= 0.001% - < 0.005% octamethylcyclotetrasiloxane; [D4] - CAS: 556-67-2 12.6. Endocrine disrupting properties No endocrine disruptor substances present in concentration >= 0.1% 12.7. Other adverse effects None

SECTION 13: Disposal considerations

13.1. Waste treatment methods Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

- 14.2. UN proper shipping name
 - N.A.
- 14.3. Transport hazard class(es)
- N.A.
- 14.4. Packing group
 - N.A.

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- 14.5. Environmental hazards ADR-Enviromental Pollutant: No IMDG-Marine pollutant: No
- 14.6. Special precautions for user N.A.
- 14.7. Maritime transport in bulk according to IMO instruments N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture Dir. 98/24/EC (Risks related to chemical agents at work) Dir. 2000/39/EC (Occupational exposure limit values) Regulation (EC) n. 1907/2006 (REACH) Regulation (EC) n. 1272/2008 (CLP) Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) n. 2020/878 Regulation (EU) n. 286/2011 (ATP 2 CLP) Regulation (EU) n. 618/2012 (ATP 3 CLP) Regulation (EU) n. 487/2013 (ATP 4 CLP) Regulation (EU) n. 944/2013 (ATP 5 CLP) Regulation (EU) n. 605/2014 (ATP 6 CLP) Regulation (EU) n. 2015/1221 (ATP 7 CLP) Regulation (EU) n. 2016/918 (ATP 8 CLP) Regulation (EU) n. 2016/1179 (ATP 9 CLP) Regulation (EU) n. 2017/776 (ATP 10 CLP) Regulation (EU) n. 2018/669 (ATP 11 CLP) Regulation (EU) n. 2018/1480 (ATP 13 CLP) Regulation (EU) n. 2019/521 (ATP 12 CLP) Regulation (EU) n. 2020/217 (ATP 14 CLP) Regulation (EU) n. 2020/1182 (ATP 15 CLP) Regulation (EU) n. 2021/643 (ATP 16 CLP) Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications: Restrictions related to the product: **Restriction 3** Restrictions related to the substances contained: **Restriction 40 Restriction 48 Restriction 70 Restriction 75** Volatile Organic compounds - VOCs = 1.01 % Volatile Organic compounds - VOCs = 10.12 g/Kg Volatile Organic compounds - VOCs = 10.09 g/l Where applicable, refer to the following regulatory provisions : Directive 2012/18/EU (Seveso III) Regulation (EC) nr 648/2004 (detergents). Dir. 2004/42/EC (VOC directive) SVHC Substances: Substances in candidate list (Art. 59 Reg. 1907/2006, REACH): octamethylcyclotetrasiloxane; [D4] PBT, vPvB Provisions related to directive EU 2012/18 (Seveso III): Seveso III category according to Annex 1, part 1 None

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15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out: None

SECTION 16: Other information

Text of phrases referred to under heading 3: H226 Flammable liquid and vapour. H361f Suspected of damaging the unborn child. H410 Very toxic to aquatic life with long lasting effects. H302 Harmful if swallowed. H373 (kidneys) (oral) May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed. H311 Toxic in contact with skin. H400 Very toxic to aquatic life. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects. EUH208 Contains (name of sensitising substance). May produce an allergic reaction. H319 Causes serious eye irritation. H330 Fatal if inhaled. H301 Toxic if swallowed. EUH071 Corrosive to the respiratory tract. H312 Harmful in contact with skin. H332 Harmful if inhaled. H225 Highly flammable liquid and vapour. H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Dermal	Acute toxicity (dermal), Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Corr. 1C	3.2/1C	Skin corrosion, Category 1C



Skin Irrit. 2	3.2/2	Skin irritation, Category 2	
Eye Dam. 1	3.3/1	Serious eye damage, Category 1	
Eye Irrit. 2	3.3/2	Eye irritation, Category 2	
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1	
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A	
Repr. 2	3.7/2	Reproductive toxicity, Category 2	
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3	
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2	
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1	
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1	
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2	

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking SECTION 2: Hazards identification SECTION 3: Composition/information on ingredients SECTION 4: First aid measures SECTION 7: Handling and storage SECTION 8: Exposure controls/personal protection SECTION 11: Toxicological information SECTION 12: Ecological information SECTION 14: Transport information SECTION 15: Regulatory information SECTION 16: Other information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Sens. 1A, H317	Calculation method

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

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specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of
	Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport
	Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NA:	Not applicable
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.

Exposure Scenario, 19/07/2019

Substance identity	
Chemical name	ETHYLENE GLYCOL
CAS No.	107-21-1
EINECS No.	203-473-3

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1. ES 1 Use a	t industrial site			
1.1 TITLE SECTION				
xposure Scenario name Use in cleaning agents				
Date - Version	18/07/2019 - 1.0			
Life Cycle Stage	Use at industrial site			
Main user group	Industrial uses			
Sector(s) of use	Industrial uses (SU3)			
Environment Contributing Sce	nario			
CS1 Covered by		ERC4		
Worker Contributing Scenario				
CS2 Industrial		PROC1		
CS3 Industrial		PROC2		
CS4 Industrial		PROC3		
CS5 Industrial		PROC4		
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CS9 Industrial F		PROC10		
CS10 Industrial PROC13				
1.2 Conditions of use affecting exposure				
1.2. CS1: Environment Contributing Scenario: Covered by (ERC4)				
Environmental release categories	Use of non-reactive processing aid at industrial site (no inclusion into or onto article) (ERC4)			
Product (article) characteristics				
Physical form of product: Liquid				
Vapour pressure: 0.123 hPa				
1.2. CS2: Worker Contributing Scenario: Industrial (PROC1)				
Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)			
Product (article) characteristics				
Concentration of substance in product:				
Amount used, frequency and duration of use/exposure				
Duration: Covers daily exposures up to 8 hours Frequency: Use frequency 240 days per year				
Conditions and measures related to personal protection, hygiene and health evaluation				
Personal protection				

Wear suitable gloves tested to EN374.			
Other conditions affecting worker exposure			
Indoor use	Indoor use		
1.2. CS3: Worker Contributing	Scenario: Industrial (PROC2)		
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)		
Product (article) characteri	stics		
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.		
Amount used, frequency and	l duration of use/exposure		
Duration: Covers daily exposures up to 8 ho Frequency: Use frequency 240 days per year	urs		
Conditions and measures re	lated to personal protection, hygiene and health evaluation		
Wear suitable gloves tested to EN3	374.		
Other conditions affecting w	vorker exposure		
Indoor use			
1.2. CS4: Worker Contributing	Scenario: Industrial (PROC3)		
Process Categories	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)		
Product (article) characteri	stics		
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.		
Amount used, frequency and	l duration of use/exposure		
Duration: Covers daily exposures up to 8 ho Frequency: Use frequency 240 days per year	urs		
Conditions and measures re	Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection Wear suitable gloves tested to ENS	374.		
Other conditions affecting w	vorker exposure		
Indoor use			
1.2. CS5: Worker Contributing Scenario: Industrial (PROC4)			
Process Categories	Chemical production where opportunity for exposure arises (PROC4)		
Product (article) characteristics			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
Amount used, frequency and duration of use/exposure			
Duration: Covers daily exposures up to 8 hours Frequency: Use frequency 240 days per year			
Conditions and measures related to personal protection, hygiene and health evaluation			

Personal protection Wear suitable gloves tested to EN374.			
Other conditions affecting w	orker exposure		
Indoor use			
1.2. CS6: Worker Contributing	Scenario: Industrial (PROC8	b)	
Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)		
Product (article) characteris	stics		
Concentration of substance in Covers percentage substance in the	product: ne product up to 100 %.		
Amount used, frequency and	duration of use/exposure	2	
Duration: Covers daily exposures up to 8 ho Frequency: Use frequency 240 days per year	urs		
Conditions and measures re	lated to personal protection	on, hygiene and health evaluation	
Personal protection Wear suitable gloves tested to EN3	74.		
Other conditions affecting w	orker exposure		
Indoor use			
1.2. CS7: Worker Contributing	Scenario: Industrial (PROC7)	
rocess Categories Industrial spraying (PROC7)			
Product (article) characteristics			
Concentration of substance in Covers percentage substance in the	product: ne product up to 100 %.		
Amount used, frequency and	duration of use/exposure	2	
Amounts used: Amount per use 1 L/min			
Duration: Covers daily exposures up to 8 hours Frequency: Use frequency 5 days per week			
Conditions and measures re	lated to personal protection	on, hygiene and health evaluation	
Personal protection			
Wear suitable gloves tested to EN374. Dermal - minimum efficiency of: 90 %			
Other conditions affecting worker exposure			
Indoor use Room size: Covers use in room size of > 1000 m ³			
1.2. CS8: Worker Contributing Scenario: Industrial (PROC8a)			
Process Categories	Transfer of substance or mixtu (PROC8a)	are (charging and discharging) at non-dedicated facilities	
Product (article) characteristics			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			

Amount used, frequency and duration of use/exposure			
Duration: Covers daily exposures up to 8 hours Frequency: Use frequency 240 days per year			
Conditions and measures re	elated to personal protection, hygiene and health evaluation		
Personal protection Wear suitable gloves tested to EN	374.		
Other conditions affecting w	vorker exposure		
Indoor use Ventilation rate: > 90 %			
1.2. CS9: Worker Contributing	Scenario: Industrial (PROC10)		
Process Categories	Roller application or brushing (PROC10)		
Product (article) characteri	istics		
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.		
Amount used, frequency and	d duration of use/exposure		
Duration: Covers daily exposures up to 8 ho Frequency: Use frequency 240 days per year	burs		
Conditions and measures re	elated to personal protection, hygiene and health evaluation		
Personal protection Wear suitable gloves tested to EN Use suitable eye protection.	374.		
Other conditions affecting worker exposure			
Indoor use			
1.2. CS10: Worker Contributin	g Scenario: Industrial (PROC13)		
Process Categories	Treatment of articles by dipping and pouring (PROC13)		
Product (article) characteri	istics		
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
Amount used, frequency and duration of use/exposure			
Duration: Covers daily exposures up to 8 hours Frequency: Use frequency 240 days per year			
Conditions and measures related to personal protection, hygiene and health evaluation			
Personal protection Wear suitable gloves tested to EN374. Use suitable eye protection.			
Other conditions affecting worker exposure			
Indoor use			
1.3 Exposure estimation and reference to its source			
1.3. CS2: Worker Contributing Scenario: Industrial (PROC1)			

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.001
inhalative, local, long-term	N/A	EASY TRA v2.0	0.001
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.004

1.3. CS3: Worker Contributing Scenario: Industrial (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.07
inhalative, local, long-term	N/A	EASY TRA v2.0	0.07
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.08

1.3. CS4: Worker Contributing Scenario: Industrial (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.22
inhalative, local, long-term	N/A	EASY TRA v2.0	0.22
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.223

1.3. CS5: Worker Contributing Scenario: Industrial (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

1.3. CS6: Worker Contributing Scenario: Industrial (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37

inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

1.3. CS7: Worker Contributing Scenario: Industrial (PROC7)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.28
inhalative, local, long-term	N/A	EASY TRA v2.0	0.28
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.52
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.8

1.3. CS8: Worker Contributing Scenario: Industrial (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.43

1.3. CS9: Worker Contributing Scenario: Industrial (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.03
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.77

1.3. CS10: Worker Contributing Scenario: Industrial (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01

combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.75

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

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

2. ES 2 Widespread use by professional workers

2.1 TITLE SECTION

Exposure Scenario name	Use in cleaning agents		
Date - Version	19/07/2019 - 1.0	19/07/2019 - 1.0	
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Environment Contributing Sce	nario		
CS1 Covered by ERC8a - ERC8d		ERC8a - ERC8d	
Worker Contributing Scenario			
CS2 General use from professional operators PROC1			
CS3 General use from professional operators PROC2			
CS4 General use from professional operators PROC3		PROC3	
CS5 General use from professional operators PROC4		PROC4	
CS6 General use from professiona	al operators	PROC8b	
CS7 General use from professional operators PROC8a		PROC8a	
CS8 General use from professional operators PROC10		PROC10	
CS9 General use from professional operators PROC11			
CS10 General use from profession	CS10 General use from professional operators PROC13		

2.2 Conditions of use affecting exposure

2.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8d)

Environmental release categories 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)

Product (article) characteristics

Physical form of product: Liquid			
0.123 hPa			
2.2. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)			
Process Categories	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions (PROC1)		
Product (article) characteri	stics		
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
Amount used, frequency and duration of use/exposure			

Duration: Covers daily exposures up to 8 ho Frequency:	urs
Use frequency 240 days per year	
Conditions and measures re	lated to personal protection, hygiene and health evaluation
Personal protection Wear suitable gloves tested to ENS Use suitable eye protection.	374.
Other conditions affecting w	vorker exposure
Indoor use	
2.2. CS3: Worker Contributing	Scenario: General use from professional operators (PROC2)
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)
Product (article) characteri	stics
Physical form of product: Liquid	
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.
Amount used, frequency and	l duration of use/exposure
Duration: Covers daily exposures up to 8 ho Frequency: Use frequency 240 days per year	urs
Conditions and measures re	lated to personal protection, hygiene and health evaluation
Personal protection Wear suitable gloves tested to ENS Use suitable eye protection.	374.
Other conditions affecting w	vorker exposure
Indoor use	
2.2. CS4: Worker Contributing	Scenario: General use from professional operators (PROC3)
Process Categories	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition (PROC3)
Product (article) characteri	stics
Physical form of product: Liquid	n vodusti
Covers percentage substance in t	he product up to 100 %.
Amount used, frequency and	l duration of use/exposure
Duration: Covers daily exposures up to 8 ho	urs
Frequency: Use frequency 240 days per year	
Conditions and measures re	lated to personal protection, hygiene and health evaluation
Personal protection Wear suitable gloves tested to ENS Use suitable eye protection.	374.
Other conditions affecting w	vorker exposure
Indoor use	

2.2. CS5: Worker Contributing	Scenario: General use from professional operators (PROC4)				
Process Categories	Chemical production where opportunity for exposure arises (PROC4)				
Product (article) characteri	stics				
Physical form of product: Liquid					
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.				
Amount used, frequency and	l duration of use/exposure				
Duration: Covers daily exposures up to 8 ho Frequency:	urs				
Conditions and measures re	lated to nersonal protection, bygiene and health evaluation				
Personal protection Wear suitable gloves tested to ENS Use suitable eye protection.	374.				
Other conditions affecting w	vorker exposure				
Indoor use					
2.2. CS6: Worker Contributing	Scenario: General use from professional operators (PROC8b)				
Process Categories	Transfer of substance or mixture (charging and discharging) at dedicated facilities (PROC8b)				
Product (article) characteri	stics				
Physical form of product: Liquid	nroduct				
Covers percentage substance in t	he product up to 100 %.				
Amount used, frequency and	l duration of use/exposure				
Duration: Covers daily exposures up to 8 ho Frequency:	urs				
Conditions and measures re	lated to personal protection, hvaiene and health evaluation				
Personal protection Wear suitable gloves tested to ENS Use suitable eye protection.	374.				
Other conditions affecting worker exposure					
Indoor use					
2.2. CS7: Worker Contributing Scenario: General use from professional operators (PROC8a)					
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)				
Product (article) characteri	stics				
Physical form of product: Liquid					
Concentration of substance in product: Covers percentage substance in the product up to 100 %.					
Amount used, frequency and duration of use/exposure					

Duration:	urs					
Frequency:						
Use frequency 240 days per year						
Conditions and measures re	lated to personal prote	ction, hygiene and health evaluation				
Wear suitable gloves tested to ENS Use suitable eye protection.	374.					
Other conditions affecting w	vorker exposure					
Indoor use Ventilation rate: 80 %						
2.2. CS8: Worker Contributing	Scenario: General use fro	om professional operators (PROC10)				
Process Categories	Roller application or brush	ing (PROC10)				
Product (article) characteri	stics					
Physical form of product: Liquid						
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.					
Amount used, frequency and	duration of use/expos	ure				
Duration: Covers daily exposures up to 8 hc Frequency: Use frequency 240 days per year	urs					
Conditions and measures re	lated to personal prote	ction, hygiene and health evaluation				
Personal protection						
Wear suitable gloves tested to EN37 Use suitable eye protection.	4.					
Wear suitable respiratory protection	ı.	Inhalation - minimum efficiency of: 80 %				
Other conditions affecting worker exposure						
Indoor use Ventilation rate: 80 %						
2.2. CS9: Worker Contributing Scenario: General use from professional operators (PROC11)						
Process Categories	Non industrial spraying (PR	(OC11)				
Product (article) characteri	stics					
Physical form of product: Liquid						
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.					
Amount used, frequency and	l duration of use/expos	ure				
Amounts used: Amount per use 0.05 L/min						
Duration: Exposure duration 180 min						

Frequency:

Use frequency < 5 days per week					
Technical and organisation	al conditions and measu	ires			
Technical and organisational n Provide a good standard of control	neasures lled ventilation (10 to 15 air cha	nges per hour).			
Conditions and measures re	lated to personal protec	ction, hygiene and health evaluation			
Personal protection					
Wear suitable gloves tested to EN37 Use suitable eye protection.	4.	Inhalation - minimum efficiency of: 90 %			
Wear suitable respiratory protection	1.	Inhalation - minimum efficiency of: 80 %			
Other conditions affecting w	orker exposure				
Indoor use Room size: Covers use in room size o Ventilation rate: 80 %	of > 100 m³				
2.2. CS10: Worker Contributing	g Scenario: General use fr	om professional operators (PROC13)			
rocess Categories Treatment of articles by dipping and pouring (PROC13)					
Product (article) characteristics					
Physical form of product: Liquid					
Concentration of substance in Covers percentage substance in the	product: ne product up to 100 %.				
Concentration of substance in Covers percentage substance in the Amount used, frequency and	product: ne product up to 100 %. I duration of use/exposi	ure			
Concentration of substance in Covers percentage substance in the Amount used, frequency and Duration: Covers daily exposures up to 8 ho Frequency: Use frequency < 240 days per year	product: ne product up to 100 %. I duration of use/exposi urs r	ure			
Concentration of substance in Covers percentage substance in the Amount used, frequency and Duration: Covers daily exposures up to 8 ho Frequency: Use frequency < 240 days per yea Conditions and measures re	product: ne product up to 100 %. I duration of use/exposi urs r Iated to personal protec	ure ction, hygiene and health evaluation			
Concentration of substance in Covers percentage substance in the Amount used, frequency and Duration: Covers daily exposures up to 8 ho Frequency: Use frequency < 240 days per yea Conditions and measures real Personal protection	product: ne product up to 100 %. I duration of use/exposi urs r Iated to personal protec	ure ction, hygiene and health evaluation			
Concentration of substance in Covers percentage substance in the Amount used, frequency and Duration: Covers daily exposures up to 8 ho Frequency: Use frequency < 240 days per yea Conditions and measures rest Personal protection Wear suitable gloves tested to EN37 Use suitable eye protection.	product: ne product up to 100 %. <i>I duration of use/exposi</i> urs r <i>Iated to personal protec</i> 4.	ction, hygiene and health evaluation			

Other conditions affecting worker exposure

Indoor use

2.3 Exposure estimation and reference to its source

2.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.001
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.001
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.003

dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.004

2.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.01
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.38

2.3. CS4: Worker Contributing Scenario: General use from professional operators (PROC3)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.22
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.22
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.003
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.223

2.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.006
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.8

2.3. CS6: Worker Contributing Scenario: General use from professional operators (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.06
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.8

2.3. CS7: Worker Contributing Scenario: General use from professional operators (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.13
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.5

2.3. CS8: Worker Contributing Scenario: General use from professional operators (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.37
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.37
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.3
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.4

2.3. CS9: Worker Contributing Scenario: General use from professional operators (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.4
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.4
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.51
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.91

2.3. CS10: Worker Contributing Scenario: General use from professional operators (PROC13)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.74
dermal, local, long-term	N/A	ECETOC TRA worker v2.0	0.74
inhalative, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.01
dermal, systemic, long-term	N/A	ECETOC TRA worker v2.0	0.75

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

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

3. ES 3 Widespread use by professional workers

3.1 TITLE SECTION

5.1 TITLE SECTION				
Exposure Scenario name	Use in antifreeze products			
Date - Version	19/07/2019 - 1.0			
Life Cycle Stage	Widespread use by professional workers			
Main user group	Professional uses			
Sector(s) of use	Professional uses (SU22)			
Environment Contributing Scen	nario			
CS1 Covered by		ERC8d		
Worker Contributing Scenario				
CS2 General use from professiona	Il operators	PROC1		
CS3 General use from professiona	Il operators	PROC2		
CS4 General use from professiona	Il operators	PROC8a		
CS5 General use from professiona	Il operators	PROC8b		
CS6 General use from professiona	al operators	PROC11		
3.2 Conditions of use	affecting exposure			
3.2. CS1: Environment Contribu	uting Scenario: Covered by (ERC8d)			
Environmental release categories	Widespread use of non-reactive processing aid (no inc (ERC8d)	lusion into or onto article, outdoor)		
Product (article) characteristics				
Physical form of product: Liquid				
Vapour pressure: 0.123 hPa				
3.2. CS2: Worker Contributing	Scenario: General use from professional operator	rs (PROC1)		
Process Categories	Chemical production or refinery in closed process with processes with equivalent containment conditions (PR	out likelihood of exposure or OC1)		
Product (article) characteris	stics			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.				
Amount used, frequency and duration of use/exposure				
Duration: Covers daily exposures up to 8 hours Frequency: Covers exposure up to 240 days per year				
Technical and organisational conditions and measures				
Technical and organisational measures Use in contained systems				
Conditions and measures related to personal protection, hygiene and health evaluation				
Personal protection				

Wear suitable gloves tested to EN374.

Other conditions affecting worker exposure				
Indoor use				
3.2. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)				
Process Categories	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions (PROC2)			
Product (article) characteri	stics			
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.			
Amount used, frequency and	l duration of use/expos	ure		
Duration: Covers daily exposures up to 8 ho Frequency: Covers exposure up to 240 days p	urs er year			
Technical and organisation	al conditions and measu	ires		
Technical and organisational n Use in contained systems	neasures			
Conditions and measures re	lated to personal prote	ction, hygiene and health evaluation		
Personal protection Wear suitable gloves tested to ENS	374.			
Other conditions affecting w	orker exposure			
Indoor use				
3.2. CS4: Worker Contributing Scenario: General use from professional operators (PROC8a)				
Process Categories	Transfer of substance or m (PROC8a)	ixture (charging and discharging) at non-dedicated facilities		
Product (article) characteristics				
Concentration of substance in Covers percentage substance in the	product: he product up to 100 %.			
Amount used, frequency and duration of use/exposure				
Duration: Covers daily exposures up to 8 ho Frequency: Covers exposure up to 240 days p	urs er year			
Technical and organisation	al conditions and measu	ires		
Technical and organisational measures Use in contained systems				
Conditions and measures related to personal protection, hygiene and health evaluation				
Personal protection				
Wear suitable gloves tested to EN374.				
Wear suitable respiratory protection. Inhalation - minimum efficiency of: 80 %				
Other conditions affecting worker exposure				
Indoor use Ventilation rate: 80 %				
3.2. CS5: Worker Contributing Scenario: General use from professional operators (PROC8b)				
Process Categories	Transfer of substance or m	ixture (charging and discharging) at dedicated facilities (PROC8b)		

Product (article) characteri	stics				
Concentration of substance in Covers percentage substance in t	product: he product up to 100	%.			
Amount used, frequency and	l duration of use	e/exposur	е		
Duration: Covers daily exposures up to 8 ho Frequency: Covers exposure up to 240 days p	purs Þer year				
Technical and organisation	al conditions an	d measure	es		
Technical and organisational r Use in contained systems	neasures				
Conditions and measures re	lated to persond	al protecti	on, h	ygiene and health	evaluation
Personal protection Wear suitable gloves tested to EN	374.				
Other conditions affecting w	vorker exposure				
Indoor use					
3.2. CS6: Worker Contributing	Scenario: Genera	l use from	prof	essional operators (PROC11)
Process Categories	Non industrial spr	aying (PROC	211)		
Product (article) characteri	stics				
Concentration of substance in Covers percentage substance in t	product: he product up to 100	%.			
Amount used, frequency and	l duration of use	e/exposur	е		
Duration: Exposure duration 180 min Frequency: Covers exposure up to 5 days per	week				
Technical and organisation	al conditions an	d measure	es		
Technical and organisational r Use in contained systems	neasures				
Conditions and measures re	lated to persond	al protecti	on, h	ygiene and health	evaluation
Personal protection					
Wear suitable gloves tested to EN37	Wear suitable gloves tested to EN374. Dermal - minimum efficiency of: 90 %			of: 90 %	
Other conditions affecting worker exposure					
Indoor use					
3.3 Exposure estimation and reference to its source					
3.3. CS2: Worker Contributing Scenario: General use from professional operators (PROC1)					
					·····
Exposure route, Health effect, Ex	posure indicator	Exposure l	evel	Calculation method	Risk Characterization Ratio (RCR)

exposure route, nearly enect, exposure indicator	Exposure level	calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.001
inhalative, local, long-term	N/A	EASY TRA v2.0	0.001
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.003

combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.004

3.3. CS3: Worker Contributing Scenario: General use from professional operators (PROC2)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.01
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.38

3.3. CS4: Worker Contributing Scenario: General use from professional operators (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.37
inhalative, local, long-term	N/A	EASY TRA v2.0	0.37
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.13
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.5

3.3. CS5: Worker Contributing Scenario: General use from professional operators (PROC8b)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.74
inhalative, local, long-term	N/A	EASY TRA v2.0	0.74
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.06
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.8

3.3. CS6: Worker Contributing Scenario: General use from professional operators (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	EASY TRA v2.0	0.4
inhalative, local, long-term	N/A	EASY TRA v2.0	0.4
dermal, systemic, long-term	N/A	EASY TRA v2.0	0.51
combined routes, systemic, long-term	N/A	EASY TRA v2.0	0.91

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

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Consumer use; Various products (PC9a, PC1, PC4, PC8, PC15) 4. ES 4

4.1 TITLE SECTION

Exposure Scenario name	Consumer goods		
Date - Version	19/07/2019 - 1.0		
Life Cycle Stage	Consumer use		
Main user group	Consumer uses		
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1) - Anti-freeze and de-icing products (PC4) - Biocidal products (PC8) - Non-metal surface treatment products (PC15) - Heat transfer fluids (PC16) - Hydraulic fluids (PC17) - Ink and toners (PC18) - Leather treatment products (PC23) - Polishes and wax blends (PC31) - Polymer preparations and compounds (PC32) - Textile dyes and impregnating products (PC34) - Washing and cleaning products (PC35)		
Environment Contributing Sce	nario		
CS1 Covered by	ERC8a - ERC8c - ERC8d - ERC8f - ERC9a - ERC9b		
Consumer Contributing Scenar	io		
CS2 Consumer PC1		PC1	
CS3 Consumer PC4 - PC16 - PC17 - PC4_1			
CS4 Consumer PC4 - PC4_2			
CS5 Consumer		PC9a - PC15 - PC9a_2, PC15_2	
CS6 Consumer	PC8		
CS7 Consumer		PC18	
CS8 Consumer		PC31	
CS9 Consumer PC32			
CS10 Consumer PC35 - PC8_2, PC35_2			
CS11 Consumer PC35 - PC8_3, PC35_3			
CS12 Consumer PC15 - PC23 - PC34 - PC9a_1, PC15_1			
4.2 Conditions of use affecting exposure			

4.2. CS1: Environment Contributing Scenario: Covered by (ERC8a, ERC8c, ERC8d, ERC8f, ERC9a, ERC9b)

Environmental release categories

Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) -Widespread use leading to inclusion into/onto article (indoor) - Widespread use of nonreactive processing aid (no inclusion into or onto article, outdoor) - Widespread use leading to inclusion into/onto article (outdoor) - Widespread use of functional fluid (indoor) -Widespread use of functional fluid (outdoor) (ERC8a, ERC8c, ERC8d, ERC8f, ERC9a, ERC9b)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

4.2. CS2: Consumer Contributing Scenario: Consumer (PC1)				
Product Categories	Adhesives, sealants (PC1)			

roduct Categories	
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Product (article) characteri	stics				
Concentration of substance in product: Covers concentrations up to 0.75 %					
4.2. CS3: Consumer Contributi	4.2. CS3: Consumer Contributing Scenario: Consumer (PC4, PC16, PC17)				
Product Categories	Anti-freeze and de-icing products - Heat transfer fluids - Hydraulic fluids (PC4, PC16, PC17)				
Product (Sub-)Categories	Washing car window (PC4_1)				
Product (article) characteri	stics				
Concentration of substance in Covers concentrations up to 45 %	product:				
Amount used, frequency and	l duration of use/exposure				
Duration: Exposure duration < 15 min					
4.2. CS4: Consumer Contributi	ng Scenario: Consumer (PC4)				
Product Categories	Anti-freeze and de-icing products (PC4)				
Product (Sub-)Categories	Pouring into radiator (PC4_2)				
Product (article) characteri	stics				
Concentration of substance in Covers percentage substance in t	product: he product up to 100 %.				
4.2. CS5: Consumer Contributi	ng Scenario: Consumer (PC9a, PC15)				
Product Categories	Coatings and paints, thinners, paint removers - Non-metal surface treatment products (PC9a, PC15)				
Product (Sub-)Categories	Solvent rich, high solid, water borne paint (PC9a_2, PC15_2)				
Product (article) characteri	stics				
Concentration of substance in Covers concentrations up to 10 %	product:				
4.2. CS6: Consumer Contributi	ng Scenario: Consumer (PC8)				
Product Categories	Biocidal products (PC8)				
4.2. CS7: Consumer Contributi	ng Scenario: Consumer (PC18)				
Product Categories	Ink and toners (PC18)				
Product (article) characteri	stics				
Concentration of substance in Covers percentage substance in t	product: he product up to 5 %.				
4.2. CS8: Consumer Contributi	ng Scenario: Consumer (PC31)				
Product Categories	Polishes and wax blends (PC31)				
Product (article) characteristics					
Concentration of substance in product: Covers concentrations up to 10 %					
4.2. CS9: Consumer Contributing Scenario: Consumer (PC32)					
Product Categories	Polymer preparations and compounds (PC32)				
Product (article) characteri	stics				
Concentration of substance in product: Covers percentage substance in the product up to 5 %.					
4.2. CS10: Consumer Contribut	ting Scenario: Consumer (PC35)				

Product Categories	Washing and cleaning products (PC35)			
Product (Sub-)Categories	Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) (PC8_2, PC35_2)			
Product (article) characteri	stics			
Concentration of substance in product: Covers concentrations up to 20 %				
4.2. CS11: Consumer Contribut	ting Scenario: Consumer (PC35)			
Product Categories	Washing and cleaning products (PC35)			
Product (Sub-)Categories	Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) (PC8_3, PC35_3)			
Product (article) characteri	stics			
Concentration of substance in Covers percentage substance in t	product: he product up to 5 %.			
4.2. CS12: Consumer Contribu	ting Scenario: Consumer (PC15, PC23, PC34)			
Product Categories	Non-metal surface treatment products - Leather treatment products - Textile dyes and impregnating products (PC15, PC23, PC34)			
Product (Sub-)Categories	Waterborne latex wall paint (PC9a_1, PC15_1)			
4.3 Exposure estimation and reference to its source				
4.2. CS2: Consumer Contributing Scenario: Consumer (PC1)				

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.59
dermal, systemic, long-term	N/A	N/A	0.005
combined routes, systemic, long-term	N/A	N/A	0.505

4.2. CS3: Consumer Contributing Scenario: Consumer (PC4, PC16, PC17)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.28
dermal, systemic, long-term	N/A	N/A	0.08
combined routes, systemic, long-term	N/A	N/A	0.36

4.2. CS4: Consumer Contributing Scenario: Consumer (PC4)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0
dermal, systemic, long-term	N/A	N/A	0.09
combined routes, systemic, long-term	N/A	N/A	0.09

4.2. CS5: Consumer Contributing Scenario: Consumer (PC9a, PC15)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.04
dermal, systemic, long-term	N/A	N/A	0.02
combined routes, systemic, long-term	N/A	N/A	0.06

4.2. CS6: Consumer Contributing Scenario: Consumer (PC8)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0
dermal, systemic, long-term	N/A	N/A	0.006
combined routes, systemic, long-term	N/A	N/A	0.006

4.2. CS7: Consumer Contributing Scenario: Consumer (PC18)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.18
dermal, systemic, long-term	N/A	N/A	0
combined routes, systemic, long-term	N/A	N/A	0.18

4.2. CS8: Consumer Contributing Scenario: Consumer (PC31)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.56
dermal, systemic, long-term	N/A	N/A	0.04
combined routes, systemic, long-term	N/A	N/A	0.6

4.2. CS9: Consumer Contributing Scenario: Consumer (PC32)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.009
dermal, systemic, long-term	N/A	N/A	0.001
combined routes, systemic, long-term	N/A	N/A	0.01

4.2. CS10: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.09
dermal, systemic, long-term	N/A	N/A	0.22
combined routes, systemic, long-term	N/A	N/A	0.31

4.2. CS11: Consumer Contributing Scenario: Consumer (PC35)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	N/A	N/A	0.02
dermal, systemic, long-term	N/A	N/A	0.002
combined routes, systemic, long-term	N/A	N/A	0.022

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

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.