

Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

SILO-PUR FLEX

Date of first edition: 9/29/2020

Safety Data Sheet dated 10/12/2025

version 9

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

1.1. Product identifier

Mixture identification:

Trade name: SILO-PUR FLEX

Trade code: 23072021-03 13

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

Recommended use: Filler

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

Malta In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 2 Highly flammable liquid and vapour.

Eye Irrit. 2 Causes serious eye irritation.

STOT SE 3 May cause drowsiness or dizziness.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word



Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash ... Thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/clothing and eye/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/... if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire, use a dry powder fire extinguisher to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to ...

Special Provisions:

EUH066 Repeated exposure may cause skin dryness or cracking.

Contains

propan-2-ol; isopropyl alcohol; isopropanol

n-butyl acetate

2-methoxy-1-methylethyl acetate

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: SILO-PUR FLEX

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥ 50 -<70 %	ethanol; ethyl alcohol	CAS:64-17-5 EC:200-578-6 Index:603-002-00-5	Flam. Liq. 2, H225; Eye Irrit. 2, H319 Specific Concentration Limits: C $\geq 50\%$: Eye Irrit. 2 H319	01-2119457610-43
≥ 20 -<50 %	propan-2-ol; isopropyl alcohol; isopropanol	CAS:67-63-0 EC:200-661-7 Index:603-117-00-0	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	01-2119457558-25
≥ 10 -<20 %	n-butyl acetate	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29
≥ 5 -<10 %	2-methoxy-1-methylethyl acetate	CAS:108-65-6 EC:203-603-9	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119475791-29

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

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

Eye irritation

Eye damages

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).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

In case of fire, use a dry powder fire extinguisher to extinguish.

Extinguishing media which must not be used for safety reasons:

None in particular.

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

For non emergency personnel:

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

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. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

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

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not use on extensive surface areas in premises where there are occupants.

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.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Always keep in a well ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Avoid accumulating electrostatic charge.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

Safety electric system.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
ethanol; ethyl alcohol CAS: 64-17-5	ACGIH		Short Term: 1000 ppm A3 - URT irr
	NATIONAL	AUSTRIA	Long Term: 1900 mg/m ³ - 1000 ppm; Short Term: Ceiling - 3800 mg/m ³ - 2000 ppm 60(Mow), 3x, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BULGARIA	Long Term: 1000 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA	Long Term: 1000 mg/m ³ ; Short Term: Ceiling - 3000 mg/m ³ Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 1900 mg/m ³ - 1000 ppm Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 1000 mg/m ³ - 500 ppm; Short Term: 1900 mg/m ³ - 1000 ppm Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 1900 mg/m ³ - 1000 ppm; Short Term: 2500 mg/m ³ - 1300 ppm Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 1900 mg/m ³ - 1000 ppm; Short Term: 9500 mg/m ³ - 5000 ppm Source: INRS outil65
	NATIONAL	GREECE	Long Term: 1900 mg/m ³ - 1000 ppm Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 1900 mg/m ³ ; Short Term: 3800 mg/m ³ N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LATVIA	Long Term: 1000 mg/m ³ Source: KN325P1
	NATIONAL	LITHUANIA	Long Term: 1000 mg/m ³ - 500 ppm; Short Term: 1900 mg/m ³ - 1000 ppm Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	NETHERLAND S	Long Term: 260 mg/m ³ ; Short Term: 1900 mg/m ³ H Source: Arbeidsomstandighedenregeling - Lijst B2
	NATIONAL	NORWAY	Long Term: 950 mg/m ³ - 500 ppm Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 1900 mg/m ³ Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA	Long Term: 960 mg/m ³ - 500 ppm; Short Term: 1920 mg/m ³ - 1000 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 1000 mg/m ³ - 500 ppm; Short Term: 1900 mg/m ³ - 1000 ppm V Source: AFS 2021:3	

SUVA	SWITZERLAND	Long Term: 960 mg/m ³ - 500 ppm; Short Term: 1920 mg/m ³ - 1000 ppm SSC, Formel / Formal, INRS NIOSH Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 1920 mg/m ³ - 1000 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 1907 mg/m ³ - 1000 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 1900 mg/m ³ - 1000 ppm Source: NN 1/2021
NATIONAL	GERMANY	Long Term: 380 mg/m ³ - 200 ppm DFG, Y, 4(II) Source: TRGS 900
NATIONAL	IRELAND	Short Term: 1000 ppm Source: 2021 Code of Practice
NATIONAL	ROMANIA	Long Term: 1900 mg/m ³ - 1000 ppm; Short Term: 9500 mg/m ³ - 5000 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 960 mg/m ³ - 500 ppm; Short Term: 1920 mg/m ³ - 1000 ppm Y Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Short Term: 1910 mg/m ³ - 1000 ppm S Source: LEP 2022
propan-2-ol; isopropyl alcohol; isopropanol CAS: 67-63-0	ACGIH	Long Term: 200 ppm (8h); Short Term: 400 ppm A4, BEI - Eye and URT irr, CNS impair
NATIONAL	AUSTRIA	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 2000 mg/m ³ - 800 ppm 15(Miw), 4x, MAK Source: BGBl. II Nr. 156/2021
NATIONAL	BULGARIA	Long Term: 980 mg/m ³ ; Short Term: 1225 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
NATIONAL	CZECHIA	Long Term: 500 mg/m ³ ; Short Term: Ceiling - 1000 mg/m ³ I Source: Nařízení vlády č. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 490 mg/m ³ - 200 ppm Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 350 mg/m ³ - 150 ppm; Short Term: 600 mg/m ³ - 250 ppm Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 620 mg/m ³ - 250 ppm Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Short Term: 980 mg/m ³ - 400 ppm Source: INRS outil65
NATIONAL	GREECE	Long Term: 980 mg/m ³ - 400 ppm; Short Term: 1225 mg/m ³ - 500 ppm Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 500 mg/m ³ ; Short Term: 1000 mg/m ³ b, i, R Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LATVIA	Long Term: 350 mg/m ³ ; Short Term: 600 mg/m ³ Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 350 mg/m ³ - 150 ppm; Short Term: 600 mg/m ³ - 250 ppm Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	NORWAY	Long Term: 245 mg/m ³ - 100 ppm Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 900 mg/m ³ ; Short Term: 1200 mg/m ³ skóra

Source: Dz.U. 2018 poz. 1286

NATIONAL	SLOVAKIA	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 1000 mg/m ³ - 400 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 350 mg/m ³ - 150 ppm; Short Term: 600 mg/m ³ - 250 ppm V Source: AFS 2021:3
SUVA	SWITZERLAND	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 1000 mg/m ³ - 400 ppm SSC, B, VRS Foie SNC Yeux / OAW Laber ZNS Auge, INRS NIOSH Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 999 mg/m ³ - 400 ppm; Short Term: 1250 mg/m ³ - 500 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 1000 mg/m ³ - 400 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 999 mg/m ³ - 400 ppm; Short Term: 1250 mg/m ³ - 500 ppm Source: NN 1/2021
NATIONAL	GERMANY	Long Term: 500 mg/m ³ - 200 ppm DFG, Y, 2(II) Source: TRGS 900
NATIONAL	IRELAND	Long Term: 200 ppm; Short Term: 400 ppm Sk Source: 2021 Code of Practice
NATIONAL	ROMANIA	Long Term: 200 mg/m ³ - 81 ppm; Short Term: 500 mg/m ³ - 203 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 1000 mg/m ³ - 400 ppm Y, BAT Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 500 mg/m ³ - 200 ppm; Short Term: 1000 mg/m ³ - 400 ppm VLB®, s Source: LEP 2022
n-butyl acetate CAS: 123-86-4	NATIONAL	AUSTRIA Long Term: 241 mg/m ³ - 50 ppm; Short Term: Ceiling - 480 mg/m ³ - 100 ppm Mow, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BULGARIA Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA Long Term: 241 mg/m ³ ; Short Term: Ceiling - 723 mg/m ³ Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK Long Term: 241 mg/m ³ - 50 ppm E Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm
	NATIONAL	FINLAND Long Term: 240 mg/m ³ - 50 ppm; Short Term: 725 mg/m ³ - 150 ppm Source: HTP-ARVOT 2020
	NATIONAL	FRANCE Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	HUNGARY Long Term: 241 mg/m ³ ; Short Term: 723 mg/m ³ i, sz, EU7, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	NETHERLANDS Long Term: 241 mg/m ³ ; Short Term: 723 mg/m ³ Source: Arbeidsomstandighedenregeling - Lijst A
	NATIONAL	POLAND Long Term: 240 mg/m ³ ; Short Term: 720 mg/m ³ Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm

SUVA	SWITZERLAND	Long Term: 240 mg/m ³ - 50 ppm; Short Term: 720 mg/m ³ - 150 ppm SSC, VR Yeux / AW Auge, INRS NIOSH Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 724 mg/m ³ - 150 ppm; Short Term: 966 mg/m ³ - 200 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 238 mg/m ³ - 50 ppm; Short Term: 712 mg/m ³ - 150 ppm Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: 2019/1831
NATIONAL	CYPRUS	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 300 mg/m ³ - 62 ppm AGS, Y, 2 (I) Source: TRGS 900
NATIONAL	GREECE	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: Υ.Α. 72/2021 (ΦΕΚ 163/Α` 9.9.2021)
NATIONAL	IRELAND	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: KN325P1
NATIONAL	LUXEMBOURG	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Dir. 2019/1.831 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm Y, EU5 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 241 mg/m ³ - 50 ppm; Short Term: 723 mg/m ³ - 150 ppm VLI Source: LEP 2022
EU		Long Term: 241 mg/m ³ - 50 ppm (8h); Short Term: 723 mg/m ³ - 150 ppm
2-methoxy-1-methylethyl acetate CAS: 108-65-6	NATIONAL AUSTRIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: Ceiling - 550 mg/m ³ - 100 ppm 5(Mow), 8x, MAK, H Source: BGBl. II Nr. 156/2021
	NATIONAL BULGARIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Кожа Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL CZECHIA	Long Term: 270 mg/m ³ ; Short Term: Ceiling - 550 mg/m ³ D, I Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL DENMARK	Long Term: 275 mg/m ³ - 50 ppm EH Source: BEK nr 2203 af 29/11/2021
	NATIONAL ESTONIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm A, S

NATIONAL	FINLAND	Long Term: 270 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Risque de pénétration percutanée Source: INRS outil65, article R. 4412-149 du Code du travail
NATIONAL	GREECE	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Δ Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 275 mg/m ³ ; Short Term: 550 mg/m ³ EU1, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	LITHUANIA	Long Term: 250 mg/m ³ - 50 ppm; Short Term: 400 mg/m ³ - 75 ppm O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	NETHERLAND S	Long Term: 550 mg/m ³ Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 270 mg/m ³ - 50 ppm H E Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 260 mg/m ³ ; Short Term: 520 mg/m ³ skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm K Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm H Source: AFS 2021:3
SUVA	SWITZERLAND D	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 275 mg/m ³ - 50 ppm SSC, VRS / OAW Source: suva.ch/valeurs-limites
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 274 mg/m ³ - 50 ppm; Short Term: 548 mg/m ³ - 100 ppm Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
NATIONAL	BELGIUM	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm D Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm koža Source: 2000/39/EZ
NATIONAL	CYPRUS	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm δέρμα Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	GERMANY	Long Term: 270 mg/m ³ - 50 ppm DFG, EU, Y, 1(I) Source: TRGS 900
NATIONAL	IRELAND	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Sk, IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Āda Source: KN325P1

NATIONAL	LUXEMBOUR G	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm skin Source: S.L.424.24
NATIONAL	PORTUGAL	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Cutânea Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm P, Dir. 2000/39 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVENIA	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm K, Y, EU1 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm vía dérmica, VLI Source: LEP 2022
EU		Long Term: 275 mg/m ³ - 50 ppm (8h); Short Term: 550 mg/m ³ - 100 ppm Skin

Biological limit values

propan-2-ol; isopropyl alcohol; isopropanol
CAS: 67-63-0

Biological Indicator: Acetone; Sampling Period: End of turn
Value: 25 mg/L; Medium: Urine

Biological Indicator: Acetone; Sampling Period: End of turn
Value: 25 mg/L; Medium: Blood

Predicted No Effect Concentration (PNEC) values

ethanol; ethyl alcohol
CAS: 64-17-5

Exposure Route: Fresh Water; PNEC Limit: 960 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.75 mg/l

Exposure Route: Marine water; PNEC Limit: 790 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 580 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 3.6 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 2.9 mg/kg

Exposure Route: Soil; PNEC Limit: 630 µg/kg

Exposure Route: Secondary poisoning; PNEC Limit: 550 mg/kg

propan-2-ol; isopropyl alcohol; isopropanol
CAS: 67-63-0

Exposure Route: Fresh Water; PNEC Limit: 140.9 mg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 140.9 mg/l

Exposure Route: Marine water; PNEC Limit: 140.9 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 2251 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 552 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 552 mg/kg

Exposure Route: Soil; PNEC Limit: 28 mg/kg

Exposure Route: Secondary poisoning; PNEC Limit: 160 mg/kg

n-butyl acetate
CAS: 123-86-4

Exposure Route: Fresh Water; PNEC Limit: 180 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 360 µg/l

Exposure Route: Marine water; PNEC Limit: 18 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 35.6 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 981 µg/kg

Exposure Route: Marine water sediments; PNEC Limit: 98.1 µg/kg

Exposure Route: Soil; PNEC Limit: 90.3 µg/kg

2-methoxy-1-methylethyl acetate
CAS: 108-65-6

Exposure Route: Fresh Water; PNEC Limit: 635 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 6.35 mg/l
Exposure Route: Marine water; PNEC Limit: 63.5 µg/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 3.29 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 329 µg/kg
Exposure Route: Soil; PNEC Limit: 290 µg/kg

Derived No Effect Level (DNEL) values

ethanol; ethyl alcohol
CAS: 64-17-5
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 950 mg/m³; Consumer: 114 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 1900 mg/m³; Consumer: 950 mg/m³
Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 343 mg/kg; Consumer: 206 mg/kg
Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 87 mg/kg

propan-2-ol; isopropyl alcohol; isopropanol
CAS: 67-63-0
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 89 mg/m³
Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 319 mg/kg
Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 26 mg/kg

n-butyl acetate
CAS: 123-86-4
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 48 mg/m³; Consumer: 12 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 600 mg/m³; Consumer: 300 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 300 mg/m³; Consumer: 35.7 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 600 mg/m³; Consumer: 300 mg/m³
Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 7 mg/kg; Consumer: 3.4 mg/kg
Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 11 mg/kg; Consumer: 6 mg/kg
Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 2 mg/kg
Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 2 mg/kg

2-methoxy-1-methylethyl acetate
CAS: 108-65-6
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 275 mg/m³; Consumer: 33 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 550 mg/m³
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Consumer: 33 mg/m³
Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 796 mg/kg; Consumer: 320 mg/kg
Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 36 mg/kg

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Nitrile rubber .

Respiratory protection:

Gas filter type AX .

Thermal Hazards:

Not expected if used as intended

Environmental exposure controls:

Prevent the product from entering sewers or surface and underground water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Colour: Yellow

Odour: Pungent

Odour threshold: N.A.

pH: Not Relevant

Kinematic viscosity: > 20,5 mm²/sec (40 °C)

Melting point/freezing point: N.A.

Boiling point or initial boiling point and boiling range: > 35.1 °C (95.2 °F)

Flash point: < 23°C

Lower and upper explosion limit: N.A.

Relative vapour density: N.A.

Vapour pressure: N.A.

Density and/or relative density: 0.84 REL

Solubility in water: Immiscible

Solubility in oil: N.A.

Partition coefficient n-octanol/water (log value): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Flammability: The product is classified Flam. Liq. 2 H225

Volatile Organic compounds - VOCs = 91 % ; 7.64 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

It may generate dangerous reactions (See subsections below)

10.2. Chemical stability

It may generate dangerous reactions (See subsections below)

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Avoid accumulating electrostatic charge.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

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 Preparation

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	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met

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	The product is classified: STOT SE 3(H336)	
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 on main components of the mixture:

ethanol; ethyl alcohol	a) acute toxicity	LD50 Oral Rat = 10470 mg/kg LC50 Inhalation Vapour Rat = 117 mg/l 4h LD50 Skin Rabbit = 17100 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral = 20700 mg/kg	Mouse
	propan-2-ol; isopropyl alcohol; isopropanol	a) acute toxicity	LD50 Oral Rat = 5840 mg/kg LC50 Inhalation Vapour Rat > 10000 Ppm 6h LD50 Skin Rabbit = 16.4 ml/Kg 24h
b) skin corrosion/irritation		Skin Irritant Rabbit Negative 4h	
c) serious eye damage/irritation		Eye Irritant Rabbit Yes	
d) respiratory or skin sensitisation		Skin Sensitization Guinea pig Negative	
f) carcinogenicity		Genotoxicity Negative Carcinogenicity = 5000 Ppm	Mouse intraperitoneal route NOEC for mouse
n-butyl acetate		a) acute toxicity	LD50 Oral Rat = 10760 mg/kg LC50 Inhalation of aerosol Rat = 0.74 mg/l 4h LD50 Skin Rabbit > 16 ml/Kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	Mouse
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 750 ppm	
2-methoxy-1-methylethyl acetate	a) acute toxicity	LD50 Oral Rat = 6190 mg/kg LD50 Skin Rabbit > 5000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	

d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Negative	
g) reproductive toxicity	No Observed Effect Level Rat = 3.69 mg/l	Inhalation route

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
ethanol; ethyl alcohol	CAS: 64-17-5 - EINECS: 200-578-6 - INDEX: 603-002-00-5	a) Aquatic acute toxicity : LC50 Fish <i>S. gairdneri</i> > 11.2 g/L 96h b) Aquatic chronic toxicity : NOEC Fish <i>Oryzias latipes</i> = 250 mg/L OECD212 a) Aquatic acute toxicity : LC50 <i>Daphnia magna</i> = 5012 mg/L 48h a) Aquatic acute toxicity : NOEC <i>Daphnia Ceriodaphnia dubia</i> = 9.6 mg/L - 10days a) Aquatic acute toxicity : EC50 Algae <i>Chlorella vulgaris</i> = 275 mg/L 72h a) Aquatic acute toxicity : LC50 <i>Paramecium caudatum</i> = 5800 mg/L - 16hr d) Terrestrial toxicity : LC50 Worm <i>Eisenia foetida</i> = 0.1 mg/cm ² e) Plant toxicity : EC50 = 633 mg/kg
propan-2-ol; isopropyl alcohol; isopropanol	CAS: 67-63-0 - EINECS: 200-661-7 - INDEX: 603-117-00-0	a) Aquatic acute toxicity : LC50 Fish <i>Pimephales promelas</i> = 9640 mg/L 96h a) Aquatic acute toxicity : EC50 <i>Daphnia magna</i> = 10000 mg/L 24h OECD guideline 202 d) Terrestrial toxicity : LC50 <i>Drosophila melanogaster</i> = 25.1 g/L 24h e) Plant toxicity : IC50 <i>Lactuca sativa</i> = 2104 mg/kg 72h
n-butyl acetate	CAS: 123-86-4 - EINECS: 204-658-1 - INDEX: 607-025-00-1	a) Aquatic acute toxicity : LC50 Fish <i>Pimephales promelas</i> = 18 mg/L 96h similar to OECD 203 a) Aquatic acute toxicity : LC50 <i>Daphnia magna</i> = 44 mg/L 48h similar to OECD 202 b) Aquatic chronic toxicity : NOEC <i>Daphnia magna</i> = 23 mg/L OECD 211 - 21days a) Aquatic acute toxicity : EC50 Algae <i>Desmodesmus subspicatus</i> = 397 mg/L 72h OECD 201 a) Aquatic acute toxicity : EC50 <i>Tetrahymena pyriformis</i> = 356 mg/L - 40h
2-methoxy-1-methylethyl acetate	CAS: 108-65-6 - EINECS: 203-603-9	a) Aquatic acute toxicity : LC50 Fish <i>Oncorhynchus mykiss</i> = 130 mg/L 96h OECD guideline 203 b) Aquatic chronic toxicity : NOEC Fish <i>Oryzias latipes</i> = 47.5 mg/L OECD guideline 204 - 14days a) Aquatic acute toxicity : LC50 <i>Daphnia magna</i> = 408 mg/L 48h OECD guideline 202 b) Aquatic chronic toxicity : NOEC <i>Daphnia magna</i> > 100 mg/L OECD guideline 211 - 24days

a) Aquatic acute toxicity : NOEC Algae Selenastrum capricornutum >= 1000 mg/L OECD guideline 201

12.2. Persistence and degradability

Component	Persistence/Degradability:	Test	Value	Notes:
ethanol; ethyl alcohol	Readily biodegradable	CO2 production	75.000	
propan-2-ol; isopropyl alcohol; isopropanol	Readily biodegradable	Biochemical oxygen demand		
n-butyl acetate	Readily biodegradable		83.000	%; OECD 301 D
2-methoxy-1-methylethyl acetate	Readily biodegradable	Dissolved organic carbon		OECD GL 301E

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value
ethanol; ethyl alcohol	Bioaccumulative	BCF - Bioconcentration factor	4.500
n-butyl acetate	Bioaccumulative	BCF - Bioconcentration factor	

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

HP 3: Flammable; HP 4: Irritant — skin irritation and eye damage

SECTION 14: Transport information

14.1. UN number or ID number

1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT

IATA-Shipping Name: PAINT

IMDG-Shipping Name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: F-E, S-E

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 3

ADR - Hazard identification number: 33
ADR-Special Provisions: 163 367 640C 650
ADR-Transport category (Tunnel restriction code): 2 (D/E)
ADR Limited Quantities: 5 L
ADR Excepted Quantities: E2

Air (IATA):

IATA-Passenger Aircraft: 353
IATA-Cargo Aircraft: 364
IATA-Label: 3
IATA-Subsidiary hazards: -
IATA-Erg: 3L
IATA-Special Provisions: A3 A72 A192

Sea (IMDG):

IMDG-Stowage and handling: Category B
IMDG-Segregation: -
IMDG-Subsidiary hazards: -
IMDG-Special Provisions: 163 367

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. 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)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Regulation (EU) n. 2023/707

Regulation (EU) n. 2023/1434 (ATP 19 CLP)

Regulation (EU) n. 2023/1435 (ATP 20 CLP)

Regulation (EU) n. 2024/197 (ATP 21 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

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: 3, 40

Restrictions related to the substances contained: 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
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Product belongs to category: P5c	5000	
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		50000
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Explosives precursors – Regulation 2019/1148

No substances listed

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

3: Severe hazard to waters

German Lagerklasse according to TRGS 510:

LGK 3

SVHC Substances:

No SVHC substances present in concentration $\geq 0.1\%$

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

ethanol; ethyl alcohol

propan-2-ol; isopropyl alcohol; isopropanol

n-butyl acetate

2-methoxy-1-methylethyl acetate

SECTION 16: Other information

Code	Description
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3

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
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	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

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
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.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
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.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

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 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information



Exposure Scenario

2-methoxy-1-methylethyl acetate

Exposure Scenario, 08/06/2021

Substance identity	
	2-methoxy-1-methylethyl acetate
CAS No.	108-65-6
INDEX No.	607-195-00-7
EINECS No.	203-603-9
Registration number	01-2119475791-29

Table of contents

1. ES 1

1. ES 1

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks by brush or roller
Date - Version	29/04/2021 - 1.0
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8a - ERC8d
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Worker Contributing Scenario

CS2 Large surfaces - Rolling, Brushing	PROC10
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1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (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)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 100 %

Amount used, frequency and duration of use (or from service life)

Amounts used:

Daily amount per site = 5000 kg

Release type: Continuous release

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 87.3 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Contain and dispose of waste according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

1.2. CS2: Worker Contributing Scenario: Large surfaces - Rolling, Brushing (PROC10)

Process Categories	Roller application or brushing (PROC10)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 100 %

Amount used, frequency and duration of use/exposure

Amounts used:

Daily amount per site = 5000 kg

Duration:

Exposure duration = 8 h/day

Frequency:

Use frequency = 365 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Ensure control measures are regularly inspected and maintained.
Carry out in a vented booth or extracted enclosure.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear a respirator conforming to EN140.

Other conditions affecting worker exposure

Covers indoor and outdoor use

Temperature: Assumes use at not more than 20 °C above ambient temperature.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8a, ERC8d)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	= 0.003 mg/L	ECETOC TRA environment v3	= 0.004
freshwater sediment	= 0.014 mg/kg KW	ECETOC TRA environment v3	= 0.004
marine water	= 0.0004 mg/L	ECETOC TRA environment v3	= 0.007
marine sediment	= 0.002 mg/kg KW	ECETOC TRA environment v3	= 0.007
soil	= 0.001 mg/kg KW	ECETOC TRA environment v3	= 0.004

1.3. CS2: Worker Contributing Scenario: Large surfaces - Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 137.71 mg/m ³	ECETOC TRA worker v3	= 0.5
dermal, systemic, long-term	= 13.71 mg/kg bw/day	ECETOC TRA worker v3	0.18

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.



Exposure Scenario

N-butyl acetate

Exposure Scenario, 13/07/2021

Substance identity	
	N-butyl acetate
CAS No.	123-86-4
INDEX No.	607-025-00-1
EINECS No.	204-658-1
Registration number	01-2119485493-29

Table of contents

1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1. ES 1 Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	14/05/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8a
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Worker Contributing Scenario

CS2 Equipment cleaning and maintenance - Roller, spreader, flow application	PROC11
CS3 Equipment cleaning and maintenance - Rolling, Brushing - Material transfers	PROC8a - PROC10

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8a)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)
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Product (article) characteristics

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 (or from service life)

Amounts used:

Application rate = 4000 t(tonnes)/year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 89.1 %

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Receiving surface water flow: 18000 m³/day

Covers indoor and outdoor use

1.2. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)

Process Categories	Non industrial spraying (PROC11)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 10000 Pa

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

Technical and organisational conditions and measures**Technical and organisational measures**

Closed systems

Open systems

Other conditions affecting worker 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.****Additional Good Practice Advice:**

Wear suitable respiratory protection.

1.2. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)**Process Categories**

Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Roller application or brushing (PROC8a, PROC10)

Product (article) characteristics**Physical form of product:**

Liquid

Vapour pressure:

< 10000 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure**Duration:**

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures**Technical and organisational measures**

Closed systems

Open systems

Other conditions affecting worker exposure**Temperature:** Assumes use at not more than 20 °C above ambient temperature.**1.3 Exposure estimation and reference to its source****1.3. CS1: Environment Contributing Scenario (ERC8a)**

Release route	Release rate	Release estimation method
N/A	N/A	ESVOC SPERC 8.3b.v1

1.3. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 242 mg/m ³	ECETOC TRA worker v3	= 0.504

1.3. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 290.4 mg/m ³	ECETOC TRA worker v3	= 0.605

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.



Exposure Scenario

Ethanol

Exposure Scenario, 29/07/2021

Substance identity	
	Ethanol
CAS No.	64-17-5
INDEX No.	603-002-00-5
EINECS No.	200-578-6
Registration number	01-2119457610-43

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9a, PC1)

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC1)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
Date - Version	29/07/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1)

Environment Contributing Scenario

CS1	ERC8a - ERC8d
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Worker Contributing Scenario

CS2 Rolling, Brushing	PROC10
CS3 Roller, spreader, flow application	PROC11
CS4 Handling and dilution of concentrates	PROC19

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (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)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 80 %

Amount used, frequency and duration of use (or from service life)

Amounts used:

Annual site tonnage = 10000 t

Release type: Continuous release

Emission days: 300 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Prevent discharge of undissolved substance to or recover from onsite wastewater.	Air - minimum efficiency of: 100 % Soil - minimum efficiency of: 20 % Water - minimum efficiency of: 100 %
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Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 90 %

STP effluent (m³/day): 2000

<i>Conditions and measures related to treatment of waste (including article waste)</i>	
Waste treatment Contain and dispose of waste according to local regulations.	
<i>Other conditions affecting environmental exposure</i>	
Local marine water dilution factor: 100 Local freshwater dilution factor: 10 Receiving surface water flow: 18000 m ³ /day	
1.2. CS2: Worker Contributing Scenario: Rolling, Brushing (PROC10)	
Process Categories	Roller application or brushing (PROC10)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Concentration of substance in product: Covers concentrations up to 80 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers use up to > 4 h	
Frequency: Use frequency 5 days per week	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Provide a basic standard of general ventilation (1 to 3 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection For further specification, refer to section 8 of the SDS.	
<i>Other conditions affecting worker exposure</i>	
Indoor use Professional use	
1.2. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)	
Process Categories	Non industrial spraying (PROC11)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Concentration of substance in product: Covers percentage substance in the product up to 25 %.	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers use up to < 4 h	
Frequency: Use frequency 5 days per week	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Provide a basic standard of general ventilation (1 to 3 air changes per hour).	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection	

Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training. For further specification, refer to section 8 of the SDS.	Dermal - minimum efficiency of: = 80 %
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Other conditions affecting worker exposure

Indoor use
Professional use

1.2. CS4: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Process Categories Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure

Duration:

Covers use up to > 4 h

Frequency:

Use frequency 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

For further specification, refer to section 8 of the SDS.

Other conditions affecting worker exposure

Indoor use
Professional use

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8a, ERC8d)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	= 0.045 mg/L	EUSES v2.1	= 0.0469
freshwater sediment	= 0.045 mg/kg dry weight	EUSES v2.1	= 0.0469
marine water	= 0.0044 mg/L	EUSES v2.1	= 0.00557
marine sediment	= 0.0044 mg/kg dry weight	EUSES v2.1	= 0.00557
soil	= 0.0003 mg/kg dry weight	EUSES v2.1	= 0.00476
wastewater treatment plant microbes	= 0.34 mg/L	EUSES v2.1	= 0.000586

1.3. CS2: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)

inhalative, systemic, long-term	= 198.08 mg/m ³	ECETOC TRA worker v2.0	= 0.202
dermal, systemic, long-term	= 27.42 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.177

1.3. CS3: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 345.75 mg/m ³	ECETOC TRA worker v2.0	= 0.364
dermal, systemic, long-term	= 21.42 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.138

1.3. CS4: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 115.25 mg/m ³	ECETOC TRA worker v2.0	= 0.1213
dermal, systemic, long-term	= 84.86 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.547

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.



Exposure Scenario

Propan-2-ol

Exposure Scenario, 29/07/2021

Substance identity	
	Propan-2-ol
CAS No.	67-63-0
INDEX No.	603-117-00-0
EINECS No.	200-661-7
Registration number	01-2119457558-25

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9a, PC1)

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC1)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
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Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1)

Environment Contributing Scenario

CS1	ERC8a - ERC8d
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Worker Contributing Scenario

CS2 Material transfers	PROC8a
CS3 Rolling, Brushing	PROC10
CS4 Roller, spreader, flow application	PROC11
CS5 Handling and dilution of concentrates	PROC19

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (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)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 35 %

1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)
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Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 100000 Pa

Concentration of substance in product:

Covers concentrations up to 35 %

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

For further specification, refer to section 8 of the SDS.

<i>Other conditions affecting worker exposure</i>	
Covers indoor and outdoor use Professional use Temperature: Assumes use at not more than 20 °C above ambient temperature.	
1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)	
Process Categories	Roller application or brushing (PROC10)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 100000 Pa	
Concentration of substance in product: Covers concentrations up to 35 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection For further specification, refer to section 8 of the SDS.	
<i>Other conditions affecting worker exposure</i>	
Covers indoor and outdoor use Professional use Temperature: Assumes use at not more than 20 °C above ambient temperature.	
1.2. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)	
Process Categories	Non industrial spraying (PROC11)
<i>Product (article) characteristics</i>	
Physical form of product: Liquid	
Vapour pressure: < 100000 Pa	
Concentration of substance in product: Covers concentrations up to 35 %	
<i>Amount used, frequency and duration of use/exposure</i>	
Duration: Covers daily exposures up to 8 hours	
<i>Technical and organisational conditions and measures</i>	
Technical and organisational measures Carry out in a vented booth or extracted enclosure.	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>	
Personal protection For further specification, refer to section 8 of the SDS.	
<i>Other conditions affecting worker exposure</i>	
Covers indoor and outdoor use Professional use Temperature: Assumes use at not more than 20 °C above ambient temperature.	
1.2. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)	
Process Categories	Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid

Vapour pressure:

< 100000 Pa

Concentration of substance in product:

Covers concentrations up to 35 %

Amount used, frequency and duration of use/exposure

Duration:

Covers daily exposures up to 8 hours

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

For further specification, refer to section 8 of the SDS.

Other conditions affecting worker exposure

Covers indoor and outdoor use

Professional use

Temperature: Assumes use at not more than 20 °C above ambient temperature.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8a, ERC8d)

Additional information on exposure estimation:

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	= 100 ppm	ECETOC TRA worker v2.0	= 0.5
dermal	= 13.71 mg/kg bw/day	ECETOC TRA worker v2.0	= 0

1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	= 100 ppm	ECETOC TRA worker v2.0	= 0.5
dermal	= 27.43 mg/kg bw/day	ECETOC TRA worker v2.0	= 0

1.3. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
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inhalative	= 150 ppm	ECETOC TRA worker v2.0	= 0.7
dermal	= 107.14 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.1

1.3. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	= 150 ppm	ECETOC TRA worker v2.0	= 0.5
dermal	= 141.43 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.2

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.