**Safety Data Sheet**
Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878
**KERAGRIP ECO PULEP**
Date of first edition: 3/26/2021
Safety Data Sheet dated 13/12/2024
version 4

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

### 1.1. Product identifier

Mixture identification:

Trade name: KERAGRIP ECO PULEP

Trade code: 27102020 -2

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

Recommended use: primer

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 Poison information centre: 01 809 2166 (Daily 8am-10pm) In case of emergency call 999 or 112
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. |
| Skin Irrit. 2 | Causes skin irritation. |
| Eye Irrit. 2 | Causes serious eye irritation. |
| Skin Sens. 1 | May cause an allergic skin reaction. |
| 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. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |

**Precautionary statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves and eye protection. |
| P501 | Dispose of contents/container in accordance with applicable regulations. |

**Special Provisions:**

PACK2 The packing must have tactive indications of danger for blind people.

**Contains**

propan-2-ol; isopropyl alcohol; isopropanol

3-aminopropyltriethoxysilane

**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 >= 0.1%

Other Hazards: No other hazards

## SECTION 3: Composition/information on ingredients

**3.1. Substances**

N.A.

**3.2. Mixtures**

Mixture identification: KERAGRIP ECO PULEP

**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<br>EC:200-578-6<br>Index:603-002-00-5 | Flam. Liq. 2, H225 Eye Irrit. 2, H319<br><br>Specific Concentration Limits:<br>C ≥ 50%: Eye Irrit. 2 H319 | 01-2119457610-43 |
| ≥20-<50 % | propan-2-ol; isopropyl alcohol; isopropanol | CAS:67-63-0<br>EC:200-661-7<br>Index:603-117-00-0 | Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336 | 01-2119457558-25 |
| ≥1-<3 % | 3-aminopropyltriethoxysilane | CAS:919-30-2<br>EC:213-048-4<br>Index:612-108-00-0 | Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1, H317 | 01-2119480479-24 |

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

In case of skin contact:

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 immediatley 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 opthalmologist 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

Skin Irritation
Erythema

**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:

CO2 or Dry chemical fire extinguisher.

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.

Contamined 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**

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

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

**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<br>CAS: 64-17-5 | ACGIH | | Short Term: 1000 ppm<br>A3 - URT irr |
| | NATIONAL | AUSTRIA | Long Term: 1900 mg/m3 - 1000 ppm; Short Term: Ceiling - 3800 mg/m3 - 2000 ppm<br>60(Mow), 3x, MAK<br>Source: GKV, BGBl. II Nr. 156/2021 |
| | NATIONAL | BULGARIA | Long Term: 1000 mg/m3<br>Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. |
| | NATIONAL | CZECHIA | Long Term: 1000 mg/m3; Short Term: Ceiling - 3000 mg/m3<br>Source: Nařízení vlády č. 361-2007 Sb |
| | NATIONAL | DENMARK | Long Term: 1900 mg/m3 - 1000 ppm<br>Source: BEK nr 2203 af 29/11/2021 |
| | NATIONAL | ESTONIA | Long Term: 1000 mg/m3 - 500 ppm; Short Term: 1900 mg/m3 - 1000 ppm<br>Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105 |
| | NATIONAL | FINLAND | Long Term: 1900 mg/m3 - 1000 ppm; Short Term: 2500 mg/m3 - 1300 ppm<br>Source: HTP-ARVOT 2020 |
| | NATIONAL | FRANCE | Long Term: 1900 mg/m3 - 1000 ppm; Short Term: 9500 mg/m3 - 5000 ppm<br>Source: INRS outil65 |
| | NATIONAL | GREECE | Long Term: 1900 mg/m3 - 1000 ppm<br>Source: ΦΕΚ 94/Α` 13.5.1999 |
| | NATIONAL | HUNGARY | Long Term: 1900 mg/m3; Short Term: 3800 mg/m3<br>N<br>Source: 5/2020. (II. 6.) ITM rendelet |
| | NATIONAL | LATVIA | Long Term: 1000 mg/m3<br>Source: KN325P1 |
| | NATIONAL | LITHUANIA | Long Term: 1000 mg/m3 - 500 ppm; Short Term: 1900 mg/m3 - 1000 ppm<br>Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389 |
| | NATIONAL | NETHERLANDS | Long Term: 260 mg/m3; Short Term: 1900 mg/m3<br>H<br>Source: Arbeidsomstandighedenregeling - Lijst B2 |
| | NATIONAL | NORWAY | Long Term: 950 mg/m3 - 500 ppm<br>Source: FOR-2021-06-28-2248 |
| | NATIONAL | POLAND | Long Term: 1900 mg/m3<br>Source: Dz.U. 2018 poz. 1286 |
| | NATIONAL | SLOVAKIA | Long Term: 960 mg/m3 - 500 ppm; Short Term: 1920 mg/m3 - 1000 ppm<br>Source: 355 NARIADENIE VLÁDY z 10. mája 2006 |
| | NATIONAL | SWEDEN | Long Term: 1000 mg/m3 - 500 ppm; Short Term: 1900 mg/m3 - 1000 ppm<br>V<br>Source: AFS 2021:3 |
| | SUVA | SWITZERLAND | Long Term: 960 mg/m3 - 500 ppm; Short Term: 1920 mg/m3 - 1000 ppm<br>SSC, Formel / Formal, INRS NIOSH<br>Source: suva.ch/valeurs-limites |
| | WEL-EH40 | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | Long Term: 1920 mg/m3 - 1000 ppm<br>Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020) |
| | NATIONAL | BELGIUM | Long Term: 1907 mg/m3 - 1000 ppm<br>Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1 |
| | NATIONAL | CROATIA | Long Term: 1900 mg/m3 - 1000 ppm<br>Source: NN 1/2021 |
| | NATIONAL | GERMANY | Long Term: 380 mg/m3 - 200 ppm |

| | | | |
|---|---|---|---|
| | | | DFG, Y, 4(II)<br>Source: TRGS 900 |
| | NATIONAL | IRELAND | Short Term: 1000 ppm<br>Source: 2021 Code of Practice |
| | NATIONAL | ROMANIA | Long Term: 1900 mg/m3 - 1000 ppm; Short Term: 9500 mg/m3 - 5000 ppm<br>Source: Republicarea 1 - nr. 743 din 29 iulie 2021 |
| | NATIONAL | SLOVENIA | Long Term: 960 mg/m3 - 500 ppm; Short Term: 1920 mg/m3 - 1000 ppm<br>Y<br>Source: UL št. 72, 11. 5. 2021 |
| | NATIONAL | SPAIN | Short Term: 1910 mg/m3 - 1000 ppm<br>s<br>Source: LEP 2022 |
| propan-2-ol; isopropyl alcohol; isopropanol<br>CAS: 67-63-0 | NATIONAL | AUSTRALIA | Long Term: 983 mg/m3 - 400 ppm (8h); Short Term: 1230 mg/m3 - 500 ppm |
| | ACGIH | | Long Term: 200 ppm (8h); Short Term: 400 ppm<br>A4, BEI - Eye and URT irr, CNS impair |
| | NATIONAL | AUSTRIA | Long Term: 500 mg/m3 - 200 ppm; Short Term: 2000 mg/m3 - 800 ppm<br>15(Miw), 4x, MAK<br>Source: BGBl. II Nr. 156/2021 |
| | NATIONAL | BULGARIA | Long Term: 980 mg/m3; Short Term: 1225 mg/m3<br>Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. |
| | NATIONAL | CZECHIA | Long Term: 500 mg/m3; Short Term: Ceiling - 1000 mg/m3<br>I<br>Source: Nařízení vlády č. 361-2007 Sb |
| | NATIONAL | DENMARK | Long Term: 490 mg/m3 - 200 ppm<br>Source: BEK nr 2203 af 29/11/2021 |
| | NATIONAL | ESTONIA | Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm<br>Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105 |
| | NATIONAL | FINLAND | Long Term: 500 mg/m3 - 200 ppm; Short Term: 620 mg/m3 - 250 ppm<br>Source: HTP-ARVOT 2020 |
| | NATIONAL | FRANCE | Short Term: 980 mg/m3 - 400 ppm<br>Source: INRS outil65 |
| | NATIONAL | GREECE | Long Term: 980 mg/m3 - 400 ppm; Short Term: 1225 mg/m3 - 500 ppm<br>Source: ΦΕΚ 94/Α` 13.5.1999 |
| | NATIONAL | HUNGARY | Long Term: 500 mg/m3; Short Term: 1000 mg/m3<br>b, i, R<br>Source: 5/2020. (II. 6.) ITM rendelet |
| | NATIONAL | LATVIA | Long Term: 350 mg/m3; Short Term: 600 mg/m3<br>Source: KN325P1 |
| | NATIONAL | LITHUANIA | Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm<br>Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389 |
| | NATIONAL | NORWAY | Long Term: 245 mg/m3 - 100 ppm<br>Source: FOR-2021-06-28-2248 |
| | NATIONAL | POLAND | Long Term: 900 mg/m3; Short Term: 1200 mg/m3<br>skóra<br>Source: Dz.U. 2018 poz. 1286 |
| | NATIONAL | SLOVAKIA | Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm<br>Source: 355 NARIADENIE VLÁDY z 10. mája 2006 |
| | NATIONAL | SWEDEN | Long Term: 350 mg/m3 - 150 ppm; Short Term: 600 mg/m3 - 250 ppm<br>V<br>Source: AFS 2021:3 |
| | SUVA | SWITZERLAND | Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm<br>SSC, B, VRS Foie SNC Yeux / OAW Laber ZNS Auge, INRS NIOSH<br>Source: suva.ch/valeurs-limites |
| | WEL-EH40 | UNITED KINGDOM OF GREAT | Long Term: 999 mg/m3 - 400 ppm; Short Term: 1250 mg/m3 - 500 ppm<br>Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020) |

| | | | |
|---|---|---|---|
| | | BRITAIN AND NORTHERN IRELAND | |
| | NATIONAL | BELGIUM | Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm<br>Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1 |
| | NATIONAL | CROATIA | Long Term: 999 mg/m3 - 400 ppm; Short Term: 1250 mg/m3 - 500 ppm<br>Source: NN 1/2021 |
| | NATIONAL | GERMANY | Long Term: 500 mg/m3 - 200 ppm<br>DFG, Y, 2(II)<br>Source: TRGS 900 |
| | NATIONAL | IRELAND | Long Term: 200 ppm; Short Term: 400 ppm<br>Sk<br>Source: 2021 Code of Practice |
| | NATIONAL | ROMANIA | Long Term: 200 mg/m3 - 81 ppm; Short Term: 500 mg/m3 - 203 ppm<br>Source: Republicarea 1 - nr. 743 din 29 iulie 2021 |
| | NATIONAL | SLOVENIA | Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm<br>Y, BAT<br>Source: UL št. 72, 11. 5. 2021 |
| | NATIONAL | SPAIN | Long Term: 500 mg/m3 - 200 ppm; Short Term: 1000 mg/m3 - 400 ppm<br>VLB®, s<br>Source: LEP 2022 |
| 3-aminopropyltriethoxysilane<br>CAS: 919-30-2 | NATIONAL | FINLAND | Long Term: 28 mg/m3 - 3 ppm; Short Term: 55 mg/m3 - 6 ppm<br>Source: HTP-ARVOT 2020 |

**Biological limit values**

| | |
|---|---|
| propan-2-ol; isopropyl alcohol; isopropanol<br>CAS: 67-63-0 | Biological Indicator: Acetone; Sampling Period: End of turn<br>Value: 25 mg/L; Medium: Urine |
| | Biological Indicator: Acetone; Sampling Period: End of turn<br>Value: 25 mg/L; Medium: Blood |

**Predicted No Effect Concentration (PNEC) values**

| | |
|---|---|
| ethanol; ethyl alcohol<br>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<br>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 |
| 3-aminopropyltriethoxysilane<br>CAS: 919-30-2 | Exposure Route: Fresh Water; PNEC Limit: 330 µg/l |
| | Exposure Route: Intermittent releases (fresh water); PNEC Limit: 3.3 mg/l |
| | Exposure Route: Marine water; PNEC Limit: 33 µg/l |
| | Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 13 mg/l |

| | |
|---|---|
| | Exposure Route: Freshwater sediments; PNEC Limit: 1.2 mg/kg |
| | Exposure Route: Marine water sediments; PNEC Limit: 120 µg/kg |
| | Exposure Route: Soil; PNEC Limit: 50 µg/kg |

**Derived No Effect Level (DNEL) values**

| | |
|---|---|
| ethanol; ethyl alcohol<br>CAS: 64-17-5 | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects<br>Worker Professional: 950 mg/m³; Consumer: 114 mg/m³ |
| | Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects<br>Worker Professional: 1900 mg/m³; Consumer: 950 mg/m³ |
| | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Worker Professional: 343 mg/kg; Consumer: 206 mg/kg |
| | Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects<br>Consumer: 87 mg/kg |
| propan-2-ol; isopropyl alcohol; isopropanol<br>CAS: 67-63-0 | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects<br>Consumer: 89 mg/m³ |
| | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Consumer: 319 mg/kg |
| | Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects<br>Consumer: 26 mg/kg |
| 3-aminopropyltriethoxysilane<br>CAS: 919-30-2 | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects<br>Worker Professional: 59 mg/m³; Consumer: 17.4 mg/m³ |
| | Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects<br>Worker Professional: 59 mg/m³; Consumer: 17.4 mg/m³ |
| | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Worker Professional: 8.3 mg/kg; Consumer: 5 mg/kg |
| | Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects<br>Worker Professional: 8.3 mg/kg; Consumer: 5 mg/kg |

**8.2. Exposure controls**

Eye protection:

Eye glasses with side protection.(EN166)

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Suitable materials for safety gloves (EN 374, EN 16523-1:2015+A1:2018: Level 6):

Nitrile rubber - NBR: thickness ≥0,4mm; breakthrough time ≥480min.

Butyl rubber - IIR: thickness ≥0,4mm; breakthrough time ≥480min.

Respiratory protection:

Gas filter type A .

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

## SECTION 9: Physical and chemical properties

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

Physical state: Liquid

Colour: Transparent

Odour: Like: Hydrocarbons, aliphatic

Odour threshold: N.A.

pH: Not Relevant

Kinematic viscosity: N.A.

Melting point/freezing point: > 120 °C (248 °F)

Boiling point or initial boiling point and boiling range: N.A.

Flash point: 13 °C (55 °F)

Lower and upper explosion limit: N.A.

Relative vapour density: N.A.

Vapour pressure: N.A.
Density and/or relative density: 0.80 g/cm3
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 = 98 % ; 744.8 g/l
**Particle characteristics:**
Particle size: N.A.

**9.2. Other information**

Not Relevant

No other relevant information

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

Stable under normal conditions

**10.2. Chemical stability**

Data not available.

**10.3. Possibility of hazardous reactions**

None.

**10.4. Conditions to avoid**

Heat and open flames. Heating

**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 | The product is classified: Skin Irrit. 2(H315) |
| c) serious eye damage/irritation | The product is classified: Eye Irrit. 2(H319) |
| d) respiratory or skin sensitisation | The product is classified: Skin Sens. 1(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 | 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 Guineapig 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 Guineapig Negative | |
| | f) carcinogenicity | Genotoxicity Negative | Mouse intraperitoneal rout |
| | | Carcinogenicity = 5000 Ppm | NOEC for mouse |
| 3-aminopropyltriethoxysilane | a) acute toxicity | LD50 Oral Rat = 1460 mg/kg | |
| | | LC50 Inhalation Vapour Rat Negative 6h | |
| | | LD50 Skin Rabbit = 4076 mg/kg 24h | |
| | b) skin corrosion/irritation | Skin Corrosive Rabbit Positive | |
| | c) serious eye damage/irritation | Eye Irritant Rabbit Yes | |
| | d) respiratory or skin sensitisation | Skin Sensitization Guineapig Positive | |
| | f) carcinogenicity | Genotoxicity Negative | Mouse intraperitoneal rout |
| | g) reproductive toxicity | No Observed Adverse Effect Level Oral Rat = 600 mg/kg | |

**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.

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 S. gairdneri > 11.2 g/L 96h |
| | | b) Aquatic chronic toxicity : NOEC Fish Oryzias latipes = 250 mg/L OECD212 |
| | | a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 5012 mg/L 48h |
| | | a) Aquatic acute toxicity : NOEC Daphnia Ceriodaphnia dubia = 9.6 mg/L - 10days |
| | | a) Aquatic acute toxicity : EC50 Algae Chlorella vulgaris = 275 mg/L 72h |
| | | a) Aquatic acute toxicity : LC50 Paramaecium caudatum = 5800 mg/L - 16hr |
| | | d) Terrestrial toxicity : LC50 Worm Eisenia foetida = 0.1 mg/cm2 |
| | | 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 Pimephales promelas = 9640 mg/L 96h |
| | | a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 10000 mg/L 24h OECD guideline 202 |
| | | d) Terrestrial toxicity : LC50 Drosophila melanogaster = 25.1 g/L 24h |
| | | e) Plant toxicity : IC50 Lactuca sativa = 2104 mg/kg 72h |
| 3-aminopropyltriethoxysilane | CAS: 919-30-2 - EINECS: 213-048-4 - INDEX: 612-108-00-0 | a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio > 934 mg/L 96h |
| | | a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 331 mg/L 48h |
| | | a) Aquatic acute toxicity : EC50 Algae Scenedesmus subspicatus > 1000 mg/L 72h |
| | | c) Bacteria toxicity : EC50 Pseudomonas putida = 43 mg/L |

**12.2. Persistence and degradability**

| Component | Persitence/Degradability: | Test | Value | Notes: |
|---|---|---|---|---|
| ethanol; ethyl alcohol | Readily biodegradable | CO2 production | 75.000 | |
| propan-2-ol; isopropyl alcohol; isopropanol | Readily biodegradable | Biochemical oxigen demand | | |
| 3-aminopropyltriethoxysilane | Non-readily biodegradable | Dissolved organic carbon | 67.000 | %; EU method C4-A; 28days |

**12.3. Bioaccumulative potential**

| Component | Bioaccumulation | Test | Value | Notes: |
|---|---|---|---|---|
| ethanol; ethyl alcohol | Bioaccumulative | BCF - Bioconcentrantion factor | 4.500 | |
| 3-aminopropyltriethoxysilane | Bioaccumulative | BCF - Bioconcentrantion factor | 3.400 | OECD 305 |

**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. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

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.

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

## SECTION 14: Transport information

**14.1. UN number or ID number**

1263

**14.2. UN proper shipping name**

ADR-Shipping Name: PAINT RELATED MATERIAL

IATA-Technical name: PAINT RELATED MATERIAL

IMDG-Technical name: PAINT RELATED MATERIAL

**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 Code: Category B

IMDG-Stowage Note: -

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. 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) |
|---|---|---|
| Product belongs to category: P5c | 5000 | 50000 |

**Explosives precursors – Regulation 2019/1148**

No substances listed

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

No substances listed

**German Water Hazard Class.**

1: Low hazard to waters

**German Lagerklasse according to TRGS 510:**

LGK 3

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

**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:**

ethanol; ethyl alcohol

propan-2-ol; isopropyl alcohol; isopropanol

3-aminopropyltriethoxysilane

## SECTION 16: Other information

| Code | Description |
|---|---|
| H225 | Highly flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| 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 |
| 3.1/4/Oral | Acute Tox. 4 | Acute toxicity (oral), Category 4 |
| 3.2/1B | Skin Corr. 1B | Skin corrosion, Category 1B |
| 3.2/2 | Skin Irrit. 2 | Skin irritation, Category 2 |
| 3.3/2 | Eye Irrit. 2 | Eye irritation, Category 2 |
| 3.4.2/1 | Skin Sens. 1 | Skin Sensitisation, Category 1 |
| 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 |
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Skin Sens. 1, H317 | 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 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
## 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 |

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# 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 |

### 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) |

#### *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 %<br>Soil - minimum efficiency of: 20 %<br>Water - minimum efficiency of: 100 % |

#### *Conditions and measures related to sewage treatment plant*

**STP type:**
Municipal Sewage Treatment Plant
Water - minimum efficiency of: = 90 %

**STP effluent ($m^3$/day):** 2000

### *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
**Receiving surface water flow:** 18000 m³/day

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

| | |
|---|---|
| **Process Categories** | Roller application or brushing (PROC10) |

### *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/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

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

| | |
|---|---|
| **Process Categories** | Non industrial spraying (PROC11) |

### *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**

| | |
|---|---|
| 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 % |

### *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/m³ | 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/m³ | 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/m³ | 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 |

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# 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 |

### 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) |

#### *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) |

#### *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.

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

| | |
|---|---|
| **Process Categories** | Roller application or brushing (PROC10) |

### *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.

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

| | |
|---|---|
| **Process Categories** | Non industrial spraying (PROC11) |

### *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

### *Technical and organisational conditions and measures*

**Technical and organisational measures**
Carry out in a vented booth or extracted enclosure.

### *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.

## 1.2. 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) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 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.

# Exposure Scenario
## 3-aminopropyltriethoxysilane

# Exposure Scenario, 14/07/2021

| Substance identity | |
|---|---|
| | 3-aminopropyltriethoxysilane |
| **CAS No.** | 919-30-2 |
| **INDEX No.** | 612-108-00-0 |
| **EINECS No.** | 213-048-4 |
| **Registration number** | 01-2119480479-24 |

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# 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 by spraying - Use in rigid foams, coatings, adhesives and sealants |
| **Date - Version** | 14/07/2021 - 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) |

**Worker Contributing Scenario**

| | |
|---|---|
| **CS1 Rolling, Brushing** | PROC10 |
| **CS2 Roller, spreader, flow application** | PROC11 |

## 1.2 Conditions of use affecting exposure

### 1.2. CS1: Worker Contributing Scenario: Rolling, Brushing (PROC10)

| | |
|---|---|
| **Process Categories** | Roller application or brushing (PROC10) |

#### *Product (article) characteristics*

**Physical form of product:**

Liquid

**Concentration of substance in product:**

Covers concentrations up to 2 %

#### *Amount used, frequency and duration of use/exposure*

**Amounts used:**

Annual site tonnage = 0.2 t(onnes)/year
Daily amount per site = 0.5 kg/day

**Duration:**

Exposure duration = 4 h

**Frequency:**

Covers exposure up to = 365 days per year

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

**Technical and organisational measures**

Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Use in contained systems
For further specification, refer to section 8 of the SDS.

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

**Personal protection**

Wear suitable respiratory protection.
For further specification, refer to section 8 of the SDS.

### 1.2. CS2: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

| | |
|---|---|
| **Process Categories** | Non industrial spraying (PROC11) |

#### *Product (article) characteristics*

**Physical form of product:**

Liquid

**Concentration of substance in product:**

Covers concentrations up to 2 %

### *Amount used, frequency and duration of use/exposure*

**Amounts used:**

Annual site tonnage = 0.2 t(onnes)/year
Daily amount per site = 0.5 kg/day

**Duration:**

Exposure duration = 4 h

**Frequency:**

Covers exposure up to = 365 days per year

### *Technical and organisational conditions and measures*

**Technical and organisational measures**

Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Use in contained systems
For further specification, refer to section 8 of the SDS.

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

**Personal protection**

Wear suitable respiratory protection.
For further specification, refer to section 8 of the SDS.

## 1.3 Exposure estimation and reference to its source

### 1.3. CS1: Worker Contributing Scenario: Rolling, Brushing (PROC10)

| Exposure route, Health effect, Exposure indicator | Exposure level | Calculation method | Risk Characterization Ratio (RCR) |
|---|---|---|---|
| dermal | = 0.055 mg/kg bw/day | ECETOC TRA worker v3 | N/A |
| inhalative | = 1.8 mg/m³ | ECETOC TRA worker v3 | N/A |

### 1.3. CS2: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

| Exposure route, Health effect, Exposure indicator | Exposure level | Calculation method | Risk Characterization Ratio (RCR) |
|---|---|---|---|
| dermal | = 0.21 mg/kg bw/day | ECETOC TRA worker v3 | N/A |
| inhalative | = 46 mg/m³ | ECETOC TRA worker v3 | N/A |

## 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.