

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 10/20/2021 version 2

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: Data not available.

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 Kerakoll Italy - +39-0536-816511 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):

Pictograms and Signal Words



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/clothing and eye/face protection.
- P501 Dispose of contents/container in accordance with applicable regulations.

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 |
|---------|--|--|---|----------------------------|
| 50-75 % | ethanol; ethyl alcohol | CAS:64-17-5 EC:200-578-6 Index:603-002-00-5 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 | 01-2119457610-43 |
| | | Index:603-002-00-5 | Specific Concentration Limits: $C \ge 50\%$: Eye Irrit. 2 H319 | |
| 25-50 % | 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 |
| 1-2,4 % | 3-aminopropyltriethoxysilane | CAS:919-30-2 EC:213-048-4 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.

move unudinaged containers from infinediate fidzard area if it can be done safe

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

6.3. 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, inhaltion 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.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

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)

| Component | OEL Type | Country | Ceiling | Long Term mg/m3 | Long Term ppm | Short Term mg/m3 | Short Term ppm | Notes |
|--|----------|--|---------|-----------------------|---------------------|------------------------|----------------------|--------------|
| ethanol; ethyl alcohol | ACGIH | NNN | | • | | • | 1000 | A3 - URT irr |
| propan-2-ol; isopropyl alcohol; isopropanol | NATIONAL | AUSTRALIA | | 983.000 | 400.000 | 1230.000 | 500.000 | |
| | NATIONAL | AUSTRIA | | 500.000 | 200.000 | 2000.000 | 800.000 | |
| | NATIONAL | BELGIUM | | 500.000 | 200.000 | 1000.000 | 400.000 | |
| | NATIONAL | CANADA | | | 200.000 | | 400.000 | Ontario |
| | NATIONAL | CANADA | | 983.000 | 400.000 | 1230.000 | 500.000 | Quebec |
| | NATIONAL | DENMARK | | 490.000 | 200.000 | 980.000 | 400.000 | |
| | NATIONAL | FINLAND | | 500.000 | 200.000 | 620.000 | 250.000 | |
| | NATIONAL | FRANCE | | | | 980.000 | 400.000 | |
| | NATIONAL | GERMANY | | 500.000 | 200.000 | 1000.000 | 400.000 | AGS |
| | NATIONAL | GERMANY | | 500.000 | 200.000 | 1000.000 | 400.000 | DFG |
| | NATIONAL | HUNGARY | | 500.000 | | 2000.000 | | |
| | NATIONAL | IRELAND | | | 200.000 | | 400.000 | |
| | NATIONAL | JAPAN | | | 400.000 | | | MHLW |
| | NATIONAL | JAPAN | С | 980.000 | 400.000 | | | JSOH |
| | NATIONAL | LATVIA | | 350.000 | | 600.000 | | |
| | NATIONAL | NEW ZEALAND | | 983.000 | 400.000 | 1230.000 | 500.000 | |
| | NATIONAL | CHINA | | 350.000 | | 700.000 | | |
| | NATIONAL | POLAND | | 900.000 | | 1200.000 | | |
| | NATIONAL | ROMANIA | | 200.000 | 81.000 | 500.000 | 203.000 | |
| | NATIONAL | SINGAPORE | | 983.000 | 400.000 | 1230.000 | 500.000 | |
| | NATIONAL | KOREA, REPUBLIC OF | | 480.000 | 200.000 | 980.000 | 400.000 | |
| | NATIONAL | SPAIN | | 500.000 | 200.000 | 1000.000 | 400.000 | |
| | NATIONAL | SWEDEN | | 350.000 | 150.000 | 600.000 | 250.000 | |
| | NATIONAL | SWITZERLA ND | | 500.000 | 200.000 | 1000.000 | 400.000 | |
| | NATIONAL | UNITED STATES OF AMERICA | | 980.000 | 400.000 | 1225.000 | 500.000 | NIOSH |
| | NATIONAL | UNITED STATES OF AMERICA | | 980.000 | 400.000 | | | OSHA |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | | 999.000 | 400.000 | 1250.000 | 500.000 | |
| | NATIONAL | ITALY | | 492.000 | 200.000 | 983.000 | 400.000 | |
| | NATIONAL | ARGENTINA | | | 400.000 | | 500.000 | |
| | NATIONAL | BULGARIA | | 980.000 | | 1225.000 | | |
| | NATIONAL | CZECHIA | | 500.000 | | 1000.000 | | |
| | NATIONAL | CHILE | | 858.000 | 358.000 | 1230.000 | 500.000 | |
| | NATIONAL | CROATIA | | 999.000 | 400.000 | 1250.000 | 500.000 | |
| | NATIONAL | ESTONIA | | 350.000 | 150.000 | 600.000 | 250.000 | |
| | NATIONAL | GREECE | | 980.000 | 400.000 | 1225.000 | 500.000 | |
| | NATIONAL | INDONESIA | | 983.000 | 400.000 | 1230.000 | 500.000 | |

| | NA | TIONAL | ICE | LAND | 490.000 | 200.000 | | | | |
|--|---------------------------------|--------------|------------|------------------|-------------------------|---------------------|----------|------------|--------|------------------------|
| | NA | TIONAL | LIT | HUANIA | 350.000 | 150.000 | 600.000 | 250.000 | | |
| | NA | TIONAL | MA | LAYSIA | 49.000 | 10.000 | | | | |
| | NA | TIONAL | ME | XICO | | 200.000 | | 400.000 | | |
| | NA | TIONAL | NO | RWAY | 245.000 | 100.000 | | | | |
| | NA | TIONAL | NE ND: | ΓHERLA S | 650.000 | 250.000 | | | | |
| | NA | TIONAL | POF | RTUGAL | | 200.000 | | 400.000 | | |
| | NA | TIONAL | RUS FED | SSIAN DERATIO | 10.000 | | 50.000 | | | |
| | | TIONAL | N | | 500.000 | 200.000 | 1000 000 | 400.000 | | |
| | INA NA | | SLC | | 500.000 | 200.000 | 1000.000 | 400.000 | | |
| | | | SLU | | 500.000 | 200.000 | 1000.000 | 400.000 | | |
| | AC | JGIN | ININ | N | | 200 | | 400 | impair | - Eye and ORT IIT, CNS |
| 3- aminopropyltrietl ilane | NA hoxys | TIONAL | FIN | LAND | 28.000 | 3.000 | 55.000 | 6.000 | | |
| Biological limit | values | | | | | | | | | |
| CAS-No. | Compo | nent | Val | ue UoM | Med | lium | Biologi | cal Indica | tor | Sampling Period |
| 67-63-0 | propan- isopropy alcohol; | 2-ol; yl | 25 | mg/L | Urin | e | Acetone | | | End of turn |
| | isopropa | anoi | 25 | mg/L | Bloo | d | Acetone | | | End of turn |
| Predicted No Fi | ffect Con | ocentrati | ion (| (PNFC) values | | | | | | |
| Component | | CAS-No |).). | PNFC Limit | Fxposure | e Route | Exp | osure Fre | quency | , |
| ethanol: ethyl alo | cohol | 64-17-5 | 5 | 960.000 µa/l | Freshwate | er | | | 4 | |
| ,, | | | | 2.750 mg/l | Intermitte (freshwat | ent releases er) | 5 | | | |
| | | | | 790.000 µg/l | Marine wa | ater | | | | |
| | | | | 580.000 mg/l | Microorga treatment | nisms in se ts | ewage | | | |
| | | | | 3.600 mg/kg | Freshwate | er sedimen | ts | | | |
| | | | | 2.900 mg/kg | Marine wa | ater sedime | ents | | | |
| | | | | 630.000 µg/kg | Soil | | | | | |
| | | | | 550.000 mg/kg | Secondar | y poinsonin | ng | | | |
| propan-2-ol; isop alcohol; isopropa | oropyl Inol | 67-63-0 |) | 140.900 mg/l | Freshwate | er | | | | |
| | | | | 140.900 mg/l | Intermitte (freshwat | ent releases er) | S | | | |
| | | | | 140.900 mg/l | Marine wa | ater | | | | |
| | | | | 2251.000 mg/l | Microorga treatment | inisms in se ts | ewage | | | |
| | | | | 552.000 mg/kg | Freshwate | er sedimen | ts | | | |
| | | | | 552.000 mg/kg | Marine wa | ater sedime | ents | | | |
| | | | | 28.000 mg/kg | Soil | | | | | |
| | | | | 160.000 mg/kg | Secondar | y poinsonin | ng | | | |
| 3- aminopropyltrietl e | hoxysilan | 919-30- I | -2 | 330.000 µg/l | Freshwate | er | | | | |
| | | | | 3.300 mg/l | Intermitte (freshwat | ent releases er) | S | | | |
| | | | | 33.000 µg/l | Marine wa | ater | | | | |
| | | | | 13 000 mg/l | Microorga | nisms in se | wade | | | |

treatments

| 1.200 mg/kg | Freshwater sediments |
|---------------|------------------------|
| 120.000 µg/kg | Marine water sediments |
| 50.000 µg/kg | Soil |

Derived No Effect Level (DNEL) values

| Component | CAS-No. | Worker Industry | Worker Professional | Consumer | Exposure Route | Exposure Frequency |
|--|----------|--------------------|--------------------------|---------------------------|---------------------|--------------------------------|
| ethanol; ethyl alcohol | 64-17-5 | · · · · · · | 950.000 mg/m³ | 114.000 mg/m ³ | Human Inhalation | Long Term, systemic effects |
| | | | 1900.000 mg/m³ | 950.000 mg/m ³ | Human Inhalation | Short Term, local effects |
| | | | 343.000 mg/kg | 206.000 mg/kg | Human Dermal | Long Term, systemic effects |
| | | | | 87.000 mg/kg | Human Oral | Long Term, systemic effects |
| propan-2-ol; isopropyl alcohol; isopropanol | 67-63-0 | | | 89.000 mg/m³ | Human Inhalation | Long Term, systemic effects |
| | | | | 319.000 mg/kg | Human Dermal | Long Term, systemic effects |
| | | | | 26.000 mg/kg | Human Oral | Long Term, systemic effects |
| 3- aminopropyltriethoxysilan e | 919-30-2 | | 59.000 mg/m ³ | 17.400 mg/m³ | Human Inhalation | Long Term, systemic effects |
| | | | 59.000 mg/m ³ | 17.400 mg/m³ | Human Inhalation | Short Term, systemic effects |
| | | | 8.300 mg/kg | 5.000 mg/kg | Human Dermal | Long Term, systemic effects |
| | | | 8.300 mg/kg | 5.000 mg/kg | Human Dermal | Short Term, systemic effects |

8.2. Exposure controls

Eye protection: Eye glasses with side protection. Protection for skin: Chemical protection clothing. Protection for hands: Gloves with long cuffs.; Nitrile rubber, Viton, 4H . Respiratory protection: Use adequate protective respiratory equipment. Thermal Hazards: N.A. Environmental exposure controls: N.A. Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid Color: Transparent Odour: Like: Hydrocarbons, aliphatic Odour threshold: N.A. pH: N.A. Kinematic viscosity: N.A. Melting point / freezing point: > 35 °C (95 °F) Initial boiling point and boiling range: N.A. Flash point: 17 °C (63 °F) Upper/lower flammability or explosive limits: N.A. Vapour density: N.A. Vapour pressure: N.A. Relative density: 0.76 g/cm3 Solubility in water: Immiscible Solubility in oil: N.A. Partition coefficient (n-octanol/water): N.A. Auto-ignition temperature: N.A. Decomposition temperature: N.A. Flammability: The product is classified Flam. Liq. 2 H225 Volatile Organic compounds - VOCs = 97.98 % ; 744.68 g/l **Particle characteristics:** Particle size: N.A. **9.2. Other information** Miscibility: N.A.

SECTION 10: Stability and reactivity

Conductivity: Not Relevant Evaporation rate: N.A.

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.

No other relevant information

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 = 10470.00 mg/kg |
|------------------------|-------------------------------------|---|
| | | LC50 Inhalation Vapour Rat = 117.00 mg/l 4h |
| | | LD50 Skin Rabbit = 17100.00 mg/kg |
| | b) skin corrosion/irritatior | 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 = 20700.00 mg/kg | Mouse |
| propan-2-ol; isopropyl alcohol; isopropanol | a) acute toxicity | LD50 Oral Rat = 5840.00 mg/kg | |
| | | LC50 Inhalation Vapour Rat > 10000.00 Ppm 6h | |
| | | LD50 Skin Rabbit = 16.40 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 = 5000.00 Ppm | NOEC for mouse |
| 3- aminopropyltriethoxysilan e | a) acute toxicity | LD50 Oral Rat = 1460.00 mg/kg | |
| | | LC50 Inhalation Vapour Rat Negative 6h | |
| | | LD50 Skin Rabbit = 4076.00 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 = 600.00000 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 > 11.20 g/L 96h |
| | | b) Aquatic chronic toxicity: NOEC Fish Oryzias latipes = 250.00 mg/L OECD212 |
| | | a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 5012.00 mg/L 48h |
| | | a) Aquatic acute toxicity : NOEC Daphnia Ceriodaphnia dubia = 9.60 mg/L $$ - 10days |
| | | a) Aquatic acute toxicity: EC50 Algae Chlorella vulgaris = 275.00 mg/L 72h |

| | | a) Aquatic acute toxicity : LC50 Paramaecium caudatum = $5800.00 \text{ mg/L} - 16 \text{hr}$ |
|--|--|---|
| | | d) Terrestrial toxicity: LC50 Worm Eisenia foetida = 0.10 mg/cm2 |
| | | e) Plant toxicity : EC50 = 633.00 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 = 9640.00 mg/L 96h |
| | | a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 10000.00 mg/L 24h OECD guideline 202 |
| | | d) Terrestrial toxicity : LC50 Drosophila melanogaster = 25.10 g/L 24h |
| | | e) Plant toxicity : IC50 Lactuca sativa = 2104.00 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 > 934.00000 mg/L 96h |
| | | a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 331.00000 mg/L 48h |
| | | a) Aquatic acute toxicity: EC50 Algae Scenedesmus subspicatus > 1000.00000 mg/L 72h |
| | propan-2-ol; isopropyl alcohol; isopropanol 3-aminopropyltriethoxysilane | propan-2-ol; isopropyl alcohol; isopropanol CAS: 67-63-0 - EINECS: 200- 661-7 - INDEX: 603-117-00-0 3-aminopropyltriethoxysilane CAS: 919-30-2 - EINECS: 213- 048-4 - INDEX: 612-108-00-0 |

c) Bacteria toxicity : EC50 Pseudomonas putida = 43.00000 mg/L

12.2. Persistence and degradability

| Component | Persitence/Degradabili ty: | 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/vPvB Ingredients are present

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.

A waste code according to European waste catalogue (EWC) 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; HP 13: Sensitising

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 exempt: No

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 Provisioning: A3 A72 A192

Sea (IMDG) :

IMDG-Stowage Code: Category B IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 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. 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: None

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

Seveso III category according Lower-tier threshold (tonnes) Upper-tier threshold (tonnes) to Annex 1, part 1

50000

Product belongs to category: P5c 5000

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

NWG: Not hazardous for water

SVHC Substances:

No data available

15.2. Chemical safety assessment

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

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 |
|---|--------------------------|
| 2.6/2 | On basis of test data |
| 3.2/2 | Calculation method |
| 3.3/2 | Calculation method |
| 3.4.2/1 | Calculation method |
| 3.8/3 | 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:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 15. REGULATORY INFORMATION

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. ES 1 Wides PC1) | spread use by professional worker | s; Various products (PC9a, | | |
|--|--|-----------------------------|--|--|
| 1.1 TITLE SECTION | | | | |
| xposure 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 Sce | nario | | | |
| CS1 | | ERC8a - ERC8d | | |
| Worker Contributing Scenario | | | | |
| CS2 Rolling, Brushing | | PROC10 | | |
| CS3 Roller, spreader, flow applica | tion | PROC11 | | |
| CS4 Handling and dilution of cond | centrates | PROC19 | | |
| 1.2 Conditions of use | affecting exposure | | | |
| 1.2. CS1: Environment Contrib | uting Scenario (ERC8a, ERC8d) | | | |
| Environmental release categories | Environmental release 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 Covers concentrations up to 80 % | product: | | | |
| Amount used, frequency and duration of use (or from service life) | | | | |
| Amounts used: Annual site tonnage = 10000 t | | | | |
| Release type: Continuous release | | | | |
| Technical and organisation | al 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 % | | | | |
| Conditions and measures related to sewage treatment plant | | | | |
| STP type: Municipal Sewage Treatment Plant Water - minimum efficiency of: = 90 % | | | | |

| 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 e | nvironmental exposure | | | |
| Local marine water dilution fa Local freshwater dilution factor Receiving surface water flow: | ctor: 100 pr: 10 18000 m³/day | | | |
| 1.2. CS2: Worker Contributing | Scenario: Rolling, Brushing (PROC10) | | | |
| Process Categories | Roller application or brushing (PROC10) | | | |
| Product (article) characteri | stics | | | |
| Physical form of product: Liquid Concentration of substance in | product: | | | |
| Amount used, frequency and | d duration of use/exposure | | | |
| Duration: Covers use up to > 4 h Frequency: Use frequency 5 days per week | al conditions and moasures | | | |
| Technical and organisational r | | | | |
| Natural ventilation is from doors, win Provide a basic standard of general ve Conditions and measures re | dows etc. Controlled ventilation means air is supplied or removed by a powered fan. entilation (1 to 3 air changes per hour). | | | |
| Personal protection | | | | |
| For further specification, refer to sect Other conditions affecting w | ion 8 of the SDS. vorker exposure | | | |
| Indoor use Professional use | | | | |
| 1.2. CS3: Worker Contributing | Scenario: Roller, spreader, flow application (PROC11) | | | |
| Process Categories | Non industrial spraying (PROC11) | | | |
| Product (article) characteri | stics | | | |
| Physical form of product: Liquid Concentration of substance in Covers percentage substance in t | product: he product up to 25 %. | | | |
| Amount used, frequency and | l duration of use/exposure | | | |
| Duration: | | | | |
| Frequency: Use frequency 5 days per week | | | | |
| Technical and organisation | al conditions and measures | | | |
| Technical and organisational r Natural ventilation is from doors, win Provide a basic standard of general ve | neasures dows etc. Controlled ventilation means air is supplied or removed by a powered fan. entilation (1 to 3 air changes per hour). | | | |
| Conditions and measures re | lated to personal protection, hygiene and health evaluation | | | |
| Personal protection | | | | |

| Wear chemically resistant gloves (tested to EN374) in combination with "basic" employee training. | Dermal - minimum efficiency of: - 80 % |
|---|--|
| For further specification, refer to section 8 of the SDS. | Dermai - minimum emclency or. – 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) characteri | stics | | | |
| Physical form of product: Liquid | | | | |
| Concentration of substance in Covers percentage substance in t | product: he product up to 25 %. | | | |
| Amount used, frequency and | l duration of use/exposure | | | |
| Duration: | | | | |
| Covers use up to > 4 h | | | | |
| Frequency: Use frequency 5 days per week | | | | |
| Technical and organisation | al conditions and measures | | | |
| Technical and organisational n | neasures | | | |
| Natural ventilation is from doors, win Provide a basic standard of general ve | dows etc. Controlled ventilation means air is supplied or removed by a powered fan. Intilation (1 to 3 air changes per hour). | | | |
| Conditions and measures re | lated to personal protection, hygiene and health evaluation | | | |
| Personal protection | | | | |
| For further specification, refer to sect | ion 8 of the SDS. | | | |
| Other conditions affecting w | vorker exposure | | | |
| Indoor use | | | | |
| Professional use | | | | |
| 1 2 Evposure estimat | on and reference to its source | | | |

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 |

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

| 1. ES 1 Wides PC1) | spread use by professional workers | ; Various products (PC9a, | | |
|--|--|---|--|--|
| 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 Sce | nario | | | |
| CS1 | | ERC8a - ERC8d | | |
| Worker Contributing Scenario | | | | |
| CS2 Material transfers | | PROC8a | | |
| CS3 Rolling, Brushing | | PROC10 | | |
| CS4 Roller, spreader, flow applica | tion | PROC11 | | |
| CS5 Handling and dilution of cond | centrates | PROC19 | | |
| 1.2 Conditions of use | affecting exposure | | | |
| 1.2. CS1: Environment Contrib | uting Scenario (ERC8a, ERC8d) | | | |
| Environmental release categories | Widespread use of non-reactive processing aid (no inc Widespread use of non-reactive processing aid (no inc (ERC8a, ERC8d) | clusion into or onto article, indoor) - clusion into or onto article, outdoor) | | |
| Product (article) characteri | stics | | | |
| Physical form of product: Liquid | | | | |
| Concentration of substance in Covers concentrations up to 35 % | product: | | | |
| 1.2. CS2: Worker Contributing | Scenario: Material transfers (PROC8a) | | | |
| Process Categories | Transfer of substance or mixture (charging and discha (PROC8a) | rging) at non-dedicated facilities | | |
| Product (article) characteristics | | | | |
| Liquid Vapour pressure: | | | | |
| < 100000 Pa | | | | |
| Concentration of substance in Covers concentrations up to 35 % | product: | | | |
| Amount used, frequency and | l duration of use/exposure | | | |
| Duration: | nurs | | | |
| Conditions and measures re | lated to personal protection, hygiene and hea | lth evaluation | | |
| Personal protection For further specification, refer to sect | ion 8 of the SDS. | | | |

| Other conditions affecting w | vorker exposure |
|---|---|
| Covers indoor and outdoor use Professional use Temperature: Assumes use at not m | nore than 20 °C above ambient temperature. |
| 1.2. CS3: Worker Contributing | Scenario: Rolling, Brushing (PROC10) |
| Process Categories | Roller application or brushing (PROC10) |
| Product (article) characteri | stics |
| Physical form of product: Liquid Vapour pressure: < 100000 Pa | |
| Concentration of substance in Covers concentrations up to 35 % | product: |
| Amount used, frequency and | l duration of use/exposure |
| Duration: | |
| Covers daily exposures up to 8 ho Conditions and measures re | lated to personal protection, hygiene and health evaluation |
| Personal protection | |
| For further specification, refer to sect Other conditions affecting w | ion 8 of the SDS. / orker exposure |
| Covers indoor and outdoor use Professional use Temperature: Assumes use at not m | nore than 20 °C above ambient temperature. |
| 1.2. CS4: Worker Contributing | Scenario: Roller, spreader, flow application (PROC11) |
| | |
| Process Categories | Non industrial spraying (PROC11) |
| Process Categories Product (article) characteri | Non industrial spraying (PROC11) stics |
| Process Categories Product (article) characteri Physical form of product: Liquid | Non industrial spraying (PROC11) stics |
| Process Categories Product (article) characteria Physical form of product: Liquid Vapour pressure: < 100000 Pa | Non industrial spraying (PROC11) stics |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % | Non industrial spraying (PROC11) stics product: |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and | Non industrial spraying (PROC11) stics product: d duration of use/exposure |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and Duration: Covers daily exposures up to 8 ho | Non industrial spraying (PROC11) stics product: I duration of use/exposure |
| Process Categories Product (article) characteria Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and Duration: Covers daily exposures up to 8 ho Technical and organisation | Non industrial spraying (PROC11) stics product: d duration of use/exposure al conditions and measures |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and Duration: Covers daily exposures up to 8 ho Technical and organisational m Carry out in a vented booth or extract | Non industrial spraying (PROC11) stics product: I duration of use/exposure surs al conditions and measures heasures ted enclosure. |
| Process Categories <i>Product (article) characteri</i> Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % <i>Amount used, frequency and</i> Duration: Covers daily exposures up to 8 ho <i>Technical and organisational</i> Carry out in a vented booth or extract <i>Conditions and measures re</i> | Non industrial spraying (PROC11) stics product: I duration of use/exposure nurs al conditions and measures measures ted enclosure. I dated to personal protection, hygiene and health evaluation |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa | Non industrial spraying (PROC11) stics product: d duration of use/exposure nurs al conditions and measures neasures ted enclosure. lated to personal protection, hygiene and health evaluation ion 8 of the SDS. |
| Process Categories Product (article) characteri Physical form of product: Liquid Vapour pressure: < 100000 Pa | Non industrial spraying (PROC11) stics product: I duration of use/exposure al conditions and measures neasures ted enclosure. Idated to personal protection, hygiene and health evaluation ion 8 of the SDS. porker exposure |
| Process Categories Product (article) characteria Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and Duration: Covers daily exposures up to 8 ho Technical and organisational m Carry out in a vented booth or extract Conditions and measures reference Personal protection For further specification, refer to sect Other conditions affecting w Covers indoor and outdoor use Professional use Temperature: Assumes use at not m | Non industrial spraying (PROC11) stics product: I duration of use/exposure ours al conditions and measures neasures ted enclosure. lated to personal protection, hygiene and health evaluation ion 8 of the SDS. zorker exposure nore than 20 °C above ambient temperature. |
| Process Categories Product (article) characteria Physical form of product: Liquid Vapour pressure: < 100000 Pa Concentration of substance in Covers concentrations up to 35 % Amount used, frequency and Duration: Covers daily exposures up to 8 ho Technical and organisational measures rese Conditions and measures rese Personal protection For further specification, refer to sect Other conditions affecting we Covers indoor and outdoor use Professional use Temperature: Assumes use at not measures | Non industrial spraying (PROC11) stics product: d duration of use/exposure al conditions and measures neasures ted enclosure. Idated to personal protection, hygiene and health evaluation ion 8 of the SDS. porker exposure hore than 20 °C above ambient temperature. Scenario: Handling and dilution of concentrates (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. ES 1 Wides PC1) | spread use by professional workers | ; Various products (PC9a, | | |
|---|--|-------------------------------------|--|--|
| 1.1 TITLE SECTION | | | | |
| Exposure Scenario name | Professional application of coatings and inks by spray adhesives and sealants | ing - Use in rigid foams, coatings, | | |
| 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 | ation | 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) character | istics | | | |
| Physical form of product: Liquid Concentration of substance in Covers concentrations up to 2 % | product: | | | |
| Amount used, frequency and | d 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 organisation | al conditions and measures | | | |
| Technical and organisational r Provide a basic standard of general vo Use in contained systems For further specification, refer to sect | neasures entilation (1 to 3 air changes per hour). tion 8 of the SDS. | | | |
| Conditions and measures re | elated to personal protection, hygiene and hea | lth evaluation | | |
| Personal protection Wear suitable respiratory protection. For further specification, refer to sect 1.2. CS2: Worker Contributing | tion 8 of the SDS. Scenario: Roller, spreader, flow application (PRO | C11) | | |
| Process Categories | Non industrial spraying (PROC11) | | | |
| Product (article) character | istics | | | |
| 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/m ³ | 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/m ³ | 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.