

Safety Data Sheet

Conforms to – Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II,
as amended by UK SI 2021/904

KERAGRIP ECO PULEP

Date of first edition: 1/5/2026

Safety Data Sheet dated 05/01/2026 version 1

kerakoll

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

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

Kerakoll UK Ltd

Tomlinson Road, Leyland, Lancashire, PR25 2DY,

United Kingdom

Tel. 01772 456831

safety@kerakoll.co.uk

1.4. Emergency telephone number

UK National Poisons Information Service.

E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

GB CLP regulation:

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

GB CLP regulation:

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 tactile indications of danger for blind people.

Contains

propan-2-ol; isopropyl alcohol; isopropanol
 3-aminopropyltriethoxysilane

Special provisions according to Annex XVII of UK REACH:

None.

2.3. Other hazards

When mixtures containing cement react with water, for instance when making concrete or mortar, or when the cement becomes wet, a strong alkaline solution is produced (high pH caused by the formation of calcium, sodium and potassium hydroxides).

Cement and mixtures containing cement may irritate the eyes, the mucous system, the throat and the respiratory system and cause coughing. Frequent inhalation of cement dust or mixtures containing cement over a long period of time increases the risk of developing lung diseases.

In case of prolonged contact with the skin, both cement and mixtures containing cement, including pastes, may cause skin sensitisation due to the presence of trace amounts of chromium VI salts. Where necessary, such an effect can be minimized by incorporating a special reducing agent to maintain the water-soluble chromium VI content to concentration rates below 0.0002% (2 ppm) on the total dry weight of cement.

No PBT or vPvB 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 GB CLP regulation and related classification:

Qty	Name	Ident. Numbr.	Classification	Registration Number
≥50-<70 %	ethanol; ethyl alcohol	CAS:64-17-5 EC:200-578-6 Index:603-002-00-5	Flam. Liq. 2, H225; Eye Irrit. 2, H319	
≥20-<50 %	propan-2-ol; isopropyl alcohol; isopropanol	CAS:67-63-0 EC:200-661-7 Index:603-117-00-0	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	
≥1-<3 %	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	

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 immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

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

Protect uninjured eye.

In case of Ingestion:

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

In case of Inhalation:

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

4.2. Most important symptoms and effects, both acute and delayed

Eye irritation

Eye damages

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

The product must be stored in waterproof, dry, clean conditions and protected from contamination. Do not use aluminium containers due to incompatibility of the materials.

The product contains cement with an addition of a Chromium reducing agent (VI) and its effectiveness decreases with time. Consequently, packaging's of the material indicate information about the production date, storing conditions and the appropriate storage period for the maintaining of the activity of the reducing agent and for maintaining the soluble Chromium (VI) amount under 2ppm over the total dry weight referred to cement (BS EN 196-10).

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)

	OEL Type	Country	Occupational Exposure Limit
ethanol; ethyl alcohol CAS: 64-17-5	ACGIH		Short Term: 1000 ppm A3 - URT irr
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 1920 mg/m ³ - 1000 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
propan-2-ol; isopropyl alcohol; isopropanol CAS: 67-63-0	ACGIH		Long Term: 200 ppm (8h); Short Term: 400 ppm A4, BEI - Eye and URT irr, CNS impair
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 999 mg/m ³ - 400 ppm; Short Term: 1250 mg/m ³ - 500 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)

Biological limit values

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

Predicted No Effect Concentration (PNEC) values

ethanol; ethyl alcohol CAS: 64-17-5	Exposure Route: Fresh Water; PNEC Limit: 960 µg/l
--	---

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.75 mg/l
Exposure Route: Marine water; PNEC Limit: 790 µg/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 580 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 3.6 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 2.9 mg/kg
Exposure Route: Soil; PNEC Limit: 630 µg/kg
Exposure Route: Secondary poisoning; PNEC Limit: 550 mg/kg

propan-2-ol; isopropyl alcohol; isopropanol CAS: 67-63-0	Exposure Route: Fresh Water; PNEC Limit: 140.9 mg/l
---	---

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 140.9 mg/l
Exposure Route: Marine water; PNEC Limit: 140.9 mg/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 2251 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 552 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 552 mg/kg
Exposure Route: Soil; PNEC Limit: 28 mg/kg
Exposure Route: Secondary poisoning; PNEC Limit: 160 mg/kg

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

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Appearance and colour: Liquid Transparent

Odour: Like: Hydrocarbons, aliphatic

Odour threshold: N.A.

pH: Not Relevant

Melting point / freezing point: 120 °C (248 °F)
Initial boiling point and boiling range: N.A.
Flash point: 13 °C (55 °F)
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 0.80 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.
Viscosity: N.A.
Explosive properties: Not Relevant
Oxidizing properties: Not Relevant
Solid/gas flammability: N.A.
Volatile Organic compounds - VOCs = 97.1 % ; 776.8 g/l

9.2. Other information

Substance Groups relevant properties N.A.
Miscibility: N.A.
Conductivity: Not Relevant

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

Stable under normal conditions.

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 toxicological effects

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
g)	reproductive toxicity	No Observed Adverse Effect Level Oral = 20700 mg/kg
Mouse oral route		
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
		Carcinogenicity = 5000 Ppm
Mouse intraperitoneal rout		
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
g)	reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 600 mg/kg
Mouse intraperitoneal rout		

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

ethanol; ethyl alcohol

Ident. Numb.

CAS: 64-17-5 -
EINECS: 200-578-6 - INDEX:
603-002-00-5

Ecotox Data

- 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

propan-2-ol; isopropyl alcohol; isopropanol	CAS: 67-63-0 - EINECS: 200-661-7 - INDEX: 603-117-00-0	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/cm ² e) Plant toxicity : EC50 = 633 mg/kg a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 9640 mg/L 96h
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 Algae Scenedesmus subspicatus > 1000 mg/L 72h c) Bacteria toxicity : EC50 Pseudomonas putida = 43 mg/L

12.2. Persistence and degradability

Component	Persistence/Degradability:	Test	Value	Notes:
ethanol; ethyl alcohol	Readily biodegradable	CO ₂ production	75.000	
propan-2-ol; isopropyl alcohol; isopropanol	Readily biodegradable	Biochemical oxygen 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 - Bioconcentration factor	4.500	
3-aminopropyltriethoxysilane	Bioaccumulative	BCF - Bioconcentration 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. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

14.1. UN number

1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT RELATED MATERIAL
IATA-Shipping Name: PAINT RELATED MATERIAL
IMDG-Shipping 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

Toxic ingredients quantity: 0.00

Very toxic ingredients quantity: 0.00

Marine pollutant: No

Environmental Pollutant: No

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)

Air (IATA):

IATA-Passenger Aircraft: 353

IATA-Cargo Aircraft: 364

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisions: A3 A72 A192

Sea (IMDG):

IMDG-Stowage and handling: Category B

IMDG-Segregation: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 163 367

IMDG-EMS: F-E, S-E

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

N.A.

SECTION 15: Regulatory information

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

Workplace exposure limit within the meaning of the Control of Substances Hazardous to Health Regulations 2002 (WEL-EH40)

REACH regulation as changed by the REACH etc. (Amendment etc.) (EU Exit) Regulations (UK REACH)

CLP regulation as changed by the Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations (GB CLP)

GB PIC legislation - (Regulation (EU) No 649/2012 as changed by the Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc) (EU Exit) Regulations

Restrictions related to the product or the substances contained according to Annex XVII of UK REACH:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: None.

Additional Regulatory Information for Great Britain

No Additional Information

Provisions related to the Control of Major Accident Hazards Regulations 2015 (GB implementation of Seveso III):

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

Product belongs to category: P5c	5000	50000
----------------------------------	------	-------

GB PIC Legislation:

No substances listed

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

UK regulations implementing Dir. 2010/75/EC (VOC directive)

Volatile Organic compounds - VOCs = 0.00 %

Volatile Organic compounds - VOCs = 0.00 g/L

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

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 GB CLP regulation:

Classification according to GB CLP	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

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.

Exposure Scenario

Ethanol

Exposure Scenario, 29/07/2021

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

Table of contents

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

1. ES 1

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

1.1 TITLE SECTION

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

Environment Contributing Scenario

CS1	ERC8a - ERC8d
-----	---------------

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 % 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 %**STP effluent (m³/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/m ³	ECETOC TRA worker v2.0	= 0.202
dermal, systemic, long-term	= 27.42 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.177

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

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

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

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

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

Guidance to check compliance with the exposure scenario:

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

Exposure Scenario

Propan-2-ol

Exposure Scenario, 29/07/2021

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

Table of contents

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

1. ES 1

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

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks
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

Table of contents

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

1. ES 1

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

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks 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/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.