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

1.1 Product identifier

Trade name/designation

11000500 proGlass COLOR 500-505

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

Relevant identified uses

Plating agent

1.3 Details of the supplier of the safety data sheet

Supplier

BENZY Markenprodukte GmbH
Zum Schacht 3
66287 Göttelborn
Germany

Telephone: +49 6825 89698-0
Telefax: +49 6825 89698-40
E-mail: info@benzy.eu
Website: www.benzy.eu

Department responsible for information

E-mail (competent person) info@benzy.eu

1.4 Emergency telephone number

Emergency telephone number: 111
(England, Wales, Scotland)
Only available during office hours.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 2	H225 Highly flammable liquid and vapour.
Asp. Tox. 1	H304 May be fatal if swallowed and enters airways.
Eye Dam. 1	H318 Causes serious eye damage.
STOT SE 3 Narcotic effects	H336 May cause drowsiness or dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

GHS02 GHS05 GHS07 GHS08

Signal word

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.

Precautionary statements

P280	Wear protective gloves and eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.

Hazard components for labelling

propan-2-ol

3-(trimethoxysilyl)propylamine
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients.

3.2 Mixtures

Description

Solvent-based mixture with special ingredients

Hazardous ingredients

CAS No. EC No. Index No.	Substance name REACH No. Classification according to Regulation (EC) No 1272/2008 [CLP]	% [mass]
67-63-0 200-661-7 603-117-00-0	**propan-2-ol** 01-2119457558-25 Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336 ATE (oral): = 5,840 mg/kg ATE (dermal): = 13,900 mg/kg ATE (inhalative): > 25 mg/L (6 h)	35,0 < 50,0
- 920-901-0 -	**Hydrocarbons, C11-C13, isoalkanes, <2% aromatics** 01-2119456810-40 Asp. Tox. 1 H304 / EUH066 ATE (dermal): > 5,000 mg/kg ATE (oral): > 5,000 mg/kg ATE (inhalative): > 5,000 mg/L (4 h)	25,0 < 35,0
13822-56-5 237-511-5 -	**3-(trimethoxysilyl)propylamine** 01-2119510159-45 Skin Irrit. 2 H315 / Eye Dam. 1 H318	7,00 < 8,00
2530-83-8 219-784-2 -	**[3-(2,3-epoxypropoxy)propyl]trimethoxysilane** 01-2119513212-58 Eye Dam. 1 H318 / Aquatic Chronic 3 H412 ATE (dermal): = 4,250 mg/kg ATE (oral): = 8,025 mg/kg ATE (inhalative): > 5.3 mg/L (4 h)	5,00 < 7,00
78-10-4 201-083-8 014-005-00-0	**tetraethyl silicate** 01-2119496195-28 Flam. Liq. 3 H226 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / STOT SE 3 H335 ATE (oral): > 2,500 mg/kg	5,00 < 7,00
67-56-1 200-659-6 603-001-00-X	**Methanol** 01-2119433307-44 Flam. Liq. 2 H225 / Acute Tox. 3 H301 / Acute Tox. 3 H311 / Acute Tox. 3 H331 / STOT SE 1 H370 Specific concentration limit (SCL) STOT SE 2 H371: >= 3,00 / STOT SE 1 H370: >= 10,00 ATE (dermal): = 17,100 mg/kg ATE (oral): = 5,628 mg/kg ATE (oral): = 143 ATE (inhalative): = 85.26 mg/L (4 h)	1,00 < 2,00

Remark

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. If unconscious but breathing normally, place in recovery position and seek medical advice.

Following inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners. Wash contaminated clothing before reuse.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3 Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO2), Powder, spray mist, (water)

Unsuitable extinguishing media

Strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

Hazardous combustion products

Hazardous combustion products: Carbon dioxide (CO2), Carbon monoxide, smoke, Nitrogen oxides (NOx).

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

For containment

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

For cleaning up

Clean using cleansing agents. Do not use solvents.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: refer to section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. Avoid respiration of swarf. Personal protection equipment: see section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Advices on general occupational hygiene

When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Storage class LGK3 - Flammable liquids

Further information on storage conditions

Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3 Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

CAS No.	Substance name	Source	Long-term /short-term (Spitzenbegrenzung)
67-56-1	Methanol	WEL	266 / 333 (-) mg/m³ (may be absorbed through the skin)
67-63-0	propan-2-ol	WEL	999 / 1,250 (-) mg/m³
78-10-4	tetraethyl silicate	WEL	44 / - (-) mg/m³

Additional information

Long-term: Long-term occupational exposure limit value
short-term: short-term occupational exposure limit value

Biological limit values

No data available

DNEL worker

CAS No.	Substance name	DNEL type	DNEL value
67-56-1	Methanol	DNEL long-term inhalative (local)	260 mg/m³
67-56-1	Methanol	DNEL long-term dermal (systemic)	40 mg/kg
67-56-1	Methanol	DNEL long-term inhalative (systemic)	260 mg/m³
67-56-1	Methanol	DNEL acute inhalative (local)	260 mg/m³
67-56-1	Methanol	DNEL acute inhalative (systemic)	260 mg/m³
67-56-1	Methanol	DNEL acute dermal, short-term (systemic)	40 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL long-term dermal (systemic)	21 mg/kg

2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL long-term inhalative (systemic)	147 mg/m³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL acute inhalative (systemic)	147 mg/m³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL acute dermal, short-term (systemic)	21 mg/kg
67-63-0	propan-2-ol	DNEL long-term dermal (systemic)	888 mg/kg
67-63-0	propan-2-ol	DNEL long-term inhalative (systemic)	500 mg/m³
67-63-0	propan-2-ol	DNEL acute inhalative (systemic)	1,000 mg/m³
78-10-4	tetraethyl silicate	DNEL long-term inhalative (local)	85 mg/m³
78-10-4	tetraethyl silicate	DNEL long-term dermal (systemic)	12.1 mg/kg
78-10-4	tetraethyl silicate	DNEL long-term inhalative (systemic)	85 mg/m³
78-10-4	tetraethyl silicate	DNEL acute inhalative (systemic)	85 mg/m³
78-10-4	tetraethyl silicate	DNEL acute dermal, short-term (systemic)	12.1 mg/kg
78-10-4	tetraethyl silicate	DNEL acute inhalative (local)	85 mg/m³

DNEL Consumer

CAS No.	Substance name	DNEL type	DNEL value
67-56-1	Methanol	DNEL long-term inhalative (local)	50 mg/m³
67-56-1	Methanol	DNEL long-term dermal (systemic)	8 mg/kg
67-56-1	Methanol	DNEL long-term inhalative (systemic)	50 mg/m³
67-56-1	Methanol	DNEL acute inhalative (local)	50 mg/m³
67-56-1	Methanol	DNEL acute inhalative (systemic)	50 mg/m³
67-56-1	Methanol	DNEL acute dermal, short-term (systemic)	8 mg/kg
67-56-1	Methanol	DNEL long-term oral (repeated)	8 mg/kg
67-56-1	Methanol	DNEL short-term oral (acute)	8 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL long-term dermal (systemic)	12.5 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL long-term inhalative (systemic)	43.5 mg/m³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL long-term oral (repeated)	12.5 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL acute inhalative (systemic)	43.5 mg/m³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	DNEL acute dermal, short-term (systemic)	12.5 mg/kg
67-63-0	propan-2-ol	DNEL long-term dermal (systemic)	319 mg/kg
67-63-0	propan-2-ol	DNEL long-term oral (repeated)	26 mg/kg
67-63-0	propan-2-ol	DNEL long-term inhalative (systemic)	89 mg/m³
67-63-0	propan-2-ol	DNEL acute inhalative (systemic)	178 mg/m³

78-10-4	tetraethyl silicate	DNEL long-term inhalative (local)	25 mg/m³
78-10-4	tetraethyl silicate	DNEL long-term dermal (systemic)	8.4 mg/kg
78-10-4	tetraethyl silicate	DNEL long-term inhalative (systemic)	25 mg/m³
78-10-4	tetraethyl silicate	DNEL acute inhalative (systemic)	25 mg/m³
78-10-4	tetraethyl silicate	DNEL acute dermal, short-term (systemic)	8.4 mg/kg
78-10-4	tetraethyl silicate	DNEL acute inhalative (local)	25 mg/m³

PNEC

CAS No.	Substance name	PNEC type	PNEC Value
67-56-1	Methanol	PNEC soil, freshwater	23.5 mg/kg
67-56-1	Methanol	PNEC aquatic, marine water	15.4 mg/L
67-56-1	Methanol	PNEC sewage treatment plant (STP)	100 mg/L
67-56-1	Methanol	PNEC aquatic, freshwater	154 mg/L
67-56-1	Methanol	PNEC sediment, freshwater	570.4 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC soil, freshwater	0.13 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC aquatic, marine water	0.1 mg/L
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC sediment, marine water	0.079 mg/kg
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC aquatic, freshwater	1 mg/L
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC sewage treatment plant (STP)	10 mg/L
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	PNEC sediment, freshwater	0.79 mg/kg
78-10-4	tetraethyl silicate	PNEC soil, freshwater	0.05 mg/kg
78-10-4	tetraethyl silicate	PNEC aquatic, intermittent release	10 mg/L
78-10-4	tetraethyl silicate	PNEC aquatic, marine water	0.019 mg/L
78-10-4	tetraethyl silicate	PNEC sediment, marine water	0.018 mg/kg
78-10-4	tetraethyl silicate	PNEC sewage treatment plant (STP)	4,000 mg/L
78-10-4	tetraethyl silicate	PNEC aquatic, freshwater	0.192 mg/L
78-10-4	tetraethyl silicate	PNEC sediment, freshwater	0.18 mg/kg

8.2 Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles: EN ISO 374

Skin protection

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Eye glasses with side protection: EN 166

Body protection

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. Anti-static clothing including shoes are recommended.

Remark

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains.See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	refer to label
Odour	characteristic
pH at 20 °C	not determined
Melting point/freezing point	-89 °C
	Source: propan-2-ol
Initial boiling point and boiling range	64 °C
Flash point	12.3 °C
flammability	Highly flammable liquid and vapour.
Lower explosion limit at 20°C	0.6 Vol-%
	Source: Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Upper explosion limit at 20°C	38.5 Vol-%
	Source: Methanol
Vapour pressure at 20°C	27.854 mbar
Relative vapour density	not applicable
Density at 20 °C	1.0 kg/l
Water solubility at 20°C	completely miscible
Partition coefficient: n-octanol/water	see section 12
Auto-ignition temperature	225 °C
	Source: tetraethyl silicate
Decomposition temperature	not determined
Viscosity at 20 °C	2.53 mm²/s
particle characteristics	not applicable

9.2 Other information

solvent content	81.5 %
Water content:	0 %

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
LD50: dermal (Rabbit): > 5,000 mg/kg; (OECD 402)

LD50: oral (Rat): > 5,000 mg/kg; (OECD 401)

LC50: inhalative (Rat): > 5,000 mg/L (4 h); (OECD 403)

Methanol
LD50: dermal (Rabbit): = 17,100 mg/kg

LD50: oral (Rat): = 5,628 mg/kg

LDLo: oral= 143

LC50: inhalative (Rat): = 85.26 mg/L (4 h)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
LD50: dermal (Rabbit): = 4,250 mg/kg

LD50: oral (Rat): = 8,025 mg/kg

LC50: inhalative (Rat): > 5.3 mg/L (4 h)

propan-2-ol
LD50: oral (Rat): = 5,840 mg/kg; (OECD 401)

LD50: dermal (Rabbit): = 13,900 mg/kg; (OECD 402)

LC50: inhalative (Rat): > 25 mg/L (6 h); (OECD 403)

tetraethyl silicate
LD50: oral (Rat): > 2,500 mg/kg; (OECD 423)

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Overall assessment on CMR properties

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: Headache, Dizziness, fatigue, amyosthenia, Dizziness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1 Toxicity

Based on available data, the classification criteria are not met.

Methanol
= 20,000 mg/L (15 h)

IC50: = 1,000 mg/L (24 h)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
NOEC > 100 mg/L (3 h)

propan-2-ol
> 100 mg/L

EC50 (Scenedesmus subspicatus): > 100 mg/L (72 h)

tetraethyl silicate
EC50 > 100 mg/L (3 h)
Method: OECD 209

Algae toxicity
Methanol
ErC50: (Pseudokirchneriella subcapitata): = 22,000 mg/L (96 h)

propan-2-ol
LOEC: = 1,000 mg/L (8 d)

tetraethyl silicate
NOEC (Pseudokirchneriella subcapitata): >= 100 mg/L (72 h)
Method: OECD 201

ErC50: (Pseudokirchneriella subcapitata): > 100 mg/L (72 h)
Method: OECD 201

Daphnia toxicity
Methanol
EC50 (Daphnia magna (Big water flea)): > 1,000 mg/L (48 h)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
EC50 (Daphnia magna (Big water flea)): = 710 mg/L (48 h)
Method: OECD 202

NOEC (Daphnia magna (Big water flea)): > 100 mg/L (21 d)

propan-2-ol
LC50: (Daphnia magna (Big water flea)): = 9,714 mg/L (24 h)
Method: OECD 202

tetraethyl silicate
NOEC (Daphnia magna (Big water flea)): >= 75 mg/L (48 h)
Method: OECD 202

EC50 (Daphnia magna (Big water flea)): > 75 mg/L (48 h)
Method: OECD 202

Fish toxicity
Methanol
LC50: (Lepomis macrochirus (Bluegill)): = 15,400 mg/L (96 h)

NOEC (Oryzias latipes (Ricefish)): = 7,900 mg/L (200 h)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
LC50: (Oncorhynchus mykiss (Rainbow trout)): = 237 mg/L (96 h)

LC0: (Cyprinus carpio (Common Carp)): = 30 mg/L (96 h)

LC50: (Lepomis macrochirus (Bluegill)): = 276 mg/L (96 h)

propan-2-ol
LC50: = 9,640 mg/L (96 h)
Method: OECD 203

tetraethyl silicate
LC50: (Danio rerio (zebrafish)): > 245 mg/L (96 h)
Method: OECD 203

NOEC (Danio rerio (zebrafish)): >= 245 mg/L (96 h)
Method: OECD 203

12.2 Persistence and degradability

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics
Biodegradation = 31.3 % (28 d)

Methanol
Biodegradation = 99 % (30 d)

Biodegradation; Chemical oyxgen demand (COD) = 1,420 %

Biodegradation; Theoretical oxygen demand (ThOD): = 1,500 %

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
Biodegradation = 37 % (28 d)

Biodegradation = 6.5 %

propan-2-ol
Biodegradation = 53 % (5 d)

tetraethyl silicate
Biodegradation = 98 % (28 d)

12.3 Bioaccumulative potential

Methanol
Bioconcentration factor (BCF) = 10

propan-2-ol
Partition coefficient: n-octanol/water = 0.05

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Do not empty into drains; dispose of this material and its container in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Waste codes/waste designations according to EWC/AVV

080111* - Waste paint and varnish containing organic solvents or other dangerous substances
* Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Other disposal recommendations

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1 UN number or ID number

UN 1263

14.2 UN proper shipping name

Land transport (ADR/RID)

Paint

Sea transport (IMDG)

Paint

Air transport (ICAO-TI / IATA-DGR)

Paint

14.3 Transport hazard class(es)

Land transport (ADR/RID)	3
Sea transport (IMDG)	3
Air transport (ICAO-TI / IATA-DGR)	3

14.4 Packing group

Land transport (ADR/RID)	II
Sea transport (IMDG)	II
Air transport (ICAO-TI / IATA-DGR)	II

14.5 Environmental hazards

Land transport (ADR/RID)	not applicable
Sea transport (IMDG)	not applicable

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

14.8 Additional information

Land transport (ADR/RID)

Tunnel restriction code: D/E
Limited quantity (LQ): 5 ltr
Hazard identification number (Kemler No.): 33

Sea transport (IMDG)

EmS-No.: F-E, S-E
Limited quantity (LQ): 5 ltr

Air transport (ICAO-TI / IATA-DGR)

Limited quantity (LQ): 1 Liter

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no.: 03, 40, 69

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC value: 899 g/l

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]
Hazard categories / Named dangerous substances

P5c FLAMMABLE LIQUIDS
Quantity 1: 5,000t; Quantity 2: 50,000t

National regulations

Observe in addition any national regulations!

Water hazard class

15.2 Chemical Safety Assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

REACH No.	Substance name	CAS No. EC No.
01-2119510159-45	3-(trimethoxysilyl)propylamine	13822-56-5

		237-511-5
01-2119456810-40	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	- 920-901-0
01-2119433307-44	Methanol	67-56-1 200-659-6
01-2119513212-58	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8 219-784-2
01-2119457558-25	propan-2-ol	67-63-0 200-661-7
01-2119496195-28	tetraethyl silicate	78-10-4 201-083-8

SECTION 16: Other information

List of relevant hazard statements and/or precautionary statements from sections 2 to 15

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 2	On basis of test data.
Asp. Tox. 1	Calculation method.
Eye Dam. 1	Calculation method.
STOT SE 3 Narcotic effects	Calculation method.

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL: Occupational Exposure Limit Value
BLV: Biological limit values
CAS: Chemical Abstracts Service
CLP: Classification, Labelling and Packaging
CMR: Carcinogenic, Mutagenic and Reprotoxic
DIN: German Institute for Standardization / German industrial standard
DNEL: Derived No-Effect Level
EAKV: European Waste Catalogue Directive
EC: Effective Concentration
EC: European Community
EN: European Standard
EU/EEA: European Economic Area
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
LC: Lethal Concentration
LD: Lethal Dose
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MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships

OECD: Organisation for Economic Cooperation and Development
PBT: persistent, bioaccumulative, toxic
PNEC: Predicted No Effect Concentration
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative

Indication of changes

* Data changed compared with the previous version.