

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product identifier : WT 356
Product name : Permahyd® Hi-TEC Mixing Colour 480 WT 356 Medium Silver
Product type : Liquid.
Other means of identification : 4025331463054; 4025331482376; 4025331489672
Date of issue/ Date of revision : 26 April 2024
Version : 1.12
Date of previous issue : 24 April 2024

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

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

1.3 Details of the supplier of the safety data sheet

Axalta Coating Systems Germany GmbH & Co. KG
Christbusch 25
DE 42285 Wuppertal
+49 (0)202 529-0
e-mail address of person responsible for this SDS : sds-competence@axalta.com

1.4 Emergency telephone number

Supplier

Telephone number : +(44)-870-8200418
Hours of operation :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Eye Dam. 1, H318
Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : 1.5 percent of the mixture consists of component(s) of unknown acute oral toxicity
1.5 percent of the mixture consists of component(s) of unknown acute dermal toxicity
1.5 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity : Contains 8.4% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

SECTION 2: Hazards identification

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements**Hazard pictograms****Signal word**

: Danger

Contains: propan-1-ol
1-pentanol**Hazard statements**: H318 - Causes serious eye damage.
H412 - Harmful to aquatic life with long lasting effects.**Precautionary statements****Prevention**: P280 - Wear eye or face protection.
P273 - Avoid release to the environment.**Response**

: P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

: Not applicable.

Disposal

: Not applicable.

Supplemental label elements

: EUH208 - Contains 3-aminopropyltriethoxysilane. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

2.3 Other hazards**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

: Mixture

| Product/ingredient name | Identifiers | % | Classification | Type |
|-------------------------------|---|-----|---|---------|
| 1-methoxy-2-propanol | REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 | ≤10 | Flam. Liq. 3, H226 STOT SE 3, H336 | [1] [2] |
| Aluminium powder (stabilized) | REACH #: 01-2119529243-45 EC: 231-072-3 CAS: 7429-90-5 | ≤10 | Flam. Sol. 1, H228 | [1] [2] |
| propan-1-ol | REACH #: 01-2119486761-29 EC: 200-746-9 CAS: 71-23-8 | ≤5 | Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336 | [1] [2] |
| 1-pentanol | REACH #: 01-2119491284-34 EC: 200-752-1 CAS: 71-41-0 | ≤5 | Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 | [1] |

SECTION 3: Composition/information on ingredients

| | | | | |
|------------------------------|--|----|--|---------|
| 2-dimethylaminoethanol | Index: 603-200-00-1 REACH #: 01-2119492298-24 EC: 203-542-8 CAS: 108-01-0 Index: 603-047-00-0 | <1 | STOT SE 3, H335 Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 | [1] [2] |
| 3-aminopropyltriethoxysilane | REACH #: 01-2119480479-24 EC: 213-048-4 CAS: 919-30-2 Index: 612-108-00-0 | <1 | Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 See Section 16 for the full text of the H statements declared above. | [1] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

SECTION 4: First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur

Ingestion : Adverse symptoms may include the following:
 stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

Due to the organic solvents content of the mixture:

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

SECTION 6: Accidental release measures

6.2 Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Due to the organic solvents content of the mixture:

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store between the following temperatures: 5 to 35°C (41 to 95°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|-------------------------------|---|
| 1-methoxy-2-propanol | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. |
| Aluminium powder (stabilized) | EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 4 mg/m ³ 8 hours. Form: respirable dust TWA: 10 mg/m ³ 8 hours. Form: inhalable dust |
| propan-1-ol | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 625 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 500 mg/m ³ 8 hours. TWA: 200 ppm 8 hours. |
| 2-dimethylaminoethanol | EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 22 mg/m ³ 15 minutes. STEL: 6 ppm 15 minutes. TWA: 2 ppm 8 hours. TWA: 7.4 mg/m ³ 8 hours. |

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|-------------------------------|------|-----------------------|-------------------------|--------------------|----------|
| 1-methoxy-2-propanol | DNEL | Long term Inhalation | 100 ppm | Workers | Systemic |
| | DNEL | Long term Oral | 33 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 43.9 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 78 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 183 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 369 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 553.5 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 553.5 mg/m ³ | Workers | Systemic |
| Aluminium powder (stabilized) | DNEL | Long term Inhalation | 3.72 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 3.72 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral | 3.95 mg/kg bw/day | General population | Systemic |
| propan-1-ol | DNEL | Short term Inhalation | 1037 mg/m ³ | Workers | Systemic |
| 1-pentanol | DNEL | Long term Inhalation | 20 ppm | Workers | Systemic |
| | DNEL | Long term Oral | 12.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 13 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 73.16 mg/m ³ | Workers | Local |

SECTION 8: Exposure controls/personal protection

| | | | | | |
|------------------------------|------|-----------------------|---------------------------|--------------------|----------|
| 2-dimethylaminoethanol | DNEL | Short term Inhalation | 218 mg/m ³ | General population | Local |
| | DNEL | Short term Inhalation | 292 mg/m ³ | Workers | Local |
| | DNEL | Short term Dermal | 100 µg/cm ² | Workers | Local |
| | DNEL | Long term Oral | 0.148 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0.25 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 0.43755 mg/m ³ | General population | Systemic |
| | DNEL | Short term Dermal | 1.2 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 1.76 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 1.76 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 5.28 mg/m ³ | Workers | Systemic |
| 3-aminopropyltriethoxysilane | DNEL | Short term Inhalation | 13.53 mg/m ³ | Workers | Local |
| | DNEL | Long term Oral | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 2 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 3.5 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 14 mg/m ³ | Workers | Systemic |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------------|------------------------|--------------|---------------|
| 1-methoxy-2-propanol | Marine water | 1 mg/l | - |
| | Fresh water | 10 mg/l | - |
| | Fresh water sediment | 52.3 mg/kg | - |
| | Marine water sediment | 5.2 mg/kg | - |
| | Sewage Treatment Plant | 100 mg/l | - |
| | Soil | 4.59 mg/kg | - |
| Aluminium powder (stabilized) | Fresh water | 0.0749 mg/l | - |
| | Sewage Treatment Plant | 20 mg/l | - |
| | Soil | 4.59 mg/kg | - |
| propan-1-ol | Marine water | 0.683 mg/l | - |
| | Sediment | 27.5 mg/kg | - |
| | Soil | 1.49 mg/kg | - |
| | Sewage Treatment Plant | 96 mg/l | - |
| | Fresh water | 6.83 mg/l | - |
| 1-pentanol | Marine water sediment | 2.75 mg/kg | - |
| | Fresh water | 0.12 mg/l | - |
| | Marine water | 0.012 mg/l | - |
| | Secondary Poisoning | 1.2 mg/l | - |
| | Fresh water sediment | 0.496 mg/kg | - |
| | Marine water sediment | 0.0496 mg/kg | - |
| | Sewage Treatment Plant | 37 mg/l | - |
| | Soil | 1.068 mg/kg | - |
| 2-dimethylaminoethanol | Fresh water | 0.066 mg/l | - |
| | Marine water | 0.007 mg/l | - |
| | Soil | 0.01 mg/kg | - |
| | Sewage Treatment Plant | 10 mg/l | - |
| | Soil | 0.01 mg/kg | - |

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : Duration / breakthrough time: <1 hour,
Glove material: NBR, nitrile rubber, material thickness as splash protection: at least 0.2 mm, (EN374)
Glove material: NBR, nitrile rubber Material thickness for short-term contact: at least 0.5 mm, (EN374)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

Expert judgment

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

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

| | |
|---|---------------------------------------|
| Physical state | : Liquid. |
| Colour | : Silver. |
| Odour | : Not available. |
| Odour threshold | : Not available. |
| Melting point/freezing point | : Technically not possible to measure |
| Initial boiling point and boiling range | : 100 to 100.1°C (212 to 212.2°F) |
| Flammability (solid, gas) | : Not available. |
| Upper/lower flammability or explosive limits | : Not available. |
| | Not available. |

| | |
|----------------------------------|---|
| Flash point | : Closed cup: 41°C (105.8°F) [Product does not sustain combustion.] |
| Auto-ignition temperature | : 270°C (518°F) |
| Decomposition temperature | : Not applicable. |
| pH | : 7.5 to 8.5 |
| Viscosity | : Dynamic: 150 mPa·s Kinematic: 142 mm ² /s |

Solubility(ies)

:

| Media | Result |
|------------|---------|
| cold water | Soluble |

| | |
|--|-----------------------------|
| Solubility in water | : Not available. |
| Miscible with water | : Yes. |
| Partition coefficient: n-octanol/ water | : Not applicable. |
| Vapour pressure | : 1.8 kPa (13.3 mm Hg) |
| Relative density | : Not available. |
| Density | : 1.057 g/cm ³ |
| Vapour density | : Not available. |
| Explosive properties | : Not available. |
| Oxidising properties | : Not available. |
| Weight volatiles | : 77.8 % (w/w) |
| VOC content | : 21.1 % (w/w) (2010/75/EU) |

9.2 Other information**9.2.1 Information with regard to physical hazard classes**

Further information Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.

Further information Not available.

room temperature (=20°C)

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 under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.
Not applicable

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains 3-aminopropyltriethoxysilane. May produce an allergic reaction.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|------------------------------|----------------------|---------------|------------|----------|
| 1-methoxy-2-propanol | LD50 Dermal | Rabbit | 13 g/kg | - |
| | LD50 Oral | Rat | 6600 mg/kg | - |
| propan-1-ol | LD50 Dermal | Rabbit | 5040 mg/kg | - |
| | LD50 Oral | Rat | 2200 mg/kg | - |
| 1-pentanol | LD50 Dermal | Rabbit - Male | 2860 mg/kg | - |
| | LD50 Oral | Rat | 3030 mg/kg | - |
| 2-dimethylaminoethanol | LC50 Inhalation Gas. | Rat | 1641 ppm | 4 hours |
| | LD50 Oral | Rat | 2 g/kg | - |
| 3-aminopropyltriethoxysilane | LD50 Dermal | Rabbit | 4.29 g/kg | - |
| | LD50 Oral | Rat | 1.57 g/kg | - |

Acute toxicity estimates

SECTION 11: Toxicological information

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|------------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| mixture | N/A | N/A | 348444.6 | 258.2 | N/A |
| 1-methoxy-2-propanol | 6600 | 13000 | N/A | N/A | N/A |
| propan-1-ol | 2200 | 5040 | N/A | N/A | N/A |
| 1-pentanol | 3030 | 2860 | N/A | 11 | N/A |
| 2-dimethylaminoethanol | 2000 | 1100 | 1641 | N/A | N/A |
| 3-aminopropyltriethoxysilane | 1570 | 4290 | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------------------|-----------------------------------|---------|-------|------------------|-------------|
| 1-methoxy-2-propanol propan-1-ol | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| | Skin - Mild irritant | Human | - | 47 hours 100 % | - |
| | Skin - Mild irritant | Human | - | 24 hours 100 % | - |
| 1-pentanol | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 uL | - |
| | Eyes - Severe irritant | Rabbit | - | 81 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| 2-dimethylaminoethanol | Skin - Severe irritant | Rabbit | - | 24 hours 3200 mg | - |
| | Eyes - Oedema of the conjunctivae | Rabbit | 3 | - | - |
| 3-aminopropyltriethoxysilane | Eyes - Severe irritant | Rabbit | - | 5 uL | - |
| | Skin - Mild irritant | Rabbit | - | 445 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Eyes - Severe irritant | Rabbit | - | - | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 750 ug | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 5 mg | - |

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|------------------------------|-------------------|------------|-------------|
| 3-aminopropyltriethoxysilane | skin | Guinea pig | Sensitising |

Mutagenicity

Carcinogenicity

Reproductive toxicity

Teratogenicity

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| 1-methoxy-2-propanol | Category 3 | - | Narcotic effects |
| propan-1-ol | Category 3 | - | Narcotic effects |
| 1-pentanol | Category 3 | - | Respiratory tract irritation |
| 2-dimethylaminoethanol | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

SECTION 11: Toxicological information

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--------------------------------------|---|----------|
| 1-methoxy-2-propanol | Acute LC50 >21100 mg/l | Daphnia - Daphnia | 48 hours |
| propan-1-ol | Acute LC50 ≥1000 mg/l | Fish - Trout | 96 hours |
| | Acute EC50 4480000 µg/l Fresh water | Algae - Green algae - <i>Selenastrum sp.</i> | 96 hours |
| | Acute LC50 1000000 µg/l Fresh water | Crustaceans - Scud - <i>Gammarus pulex</i> | 48 hours |
| | Acute LC50 2950000 µg/l Fresh water | Daphnia - Water flea - <i>Daphnia pulex</i> | 48 hours |
| 1-pentanol | Acute LC50 3800000 µg/l Marine water | Fish - Bleak - <i>Alburnus alburnus</i> | 96 hours |
| | Acute EC50 714 mg/l Fresh water | Daphnia - Water flea - <i>Daphnia magna</i> | 48 hours |
| | Acute LC50 180 ppm Marine water | Fish - Inland silverside - <i>Menidia beryllina</i> | 96 hours |
| | Chronic EC10 0.059 mg/l | Daphnia | 21 days |
| | Chronic NOEC 10 mg/l | Fish | 35 days |
| 2-dimethylaminoethanol | Acute EC50 98.37 mg/l | Daphnia | 48 hours |
| | Acute LC50 146.63 mg/l Fresh water | Fish | 96 hours |

Conclusion/Summary : Not available.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|-------------------------|---|----------------------------|------|----------|
| 1-methoxy-2-propanol | OECD 301E | 96 % - 28 days | - | - |
| 1-pentanol | OECD 310 | 100 % - Readily - 18 days | - | - |
| | Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test) | | | |
| 2-dimethylaminoethanol | OECD 302C | 60.5 % - Readily - 28 days | - | - |
| | Inherent Biodegradability: Modified MITI Test (II) | | | |

Conclusion/Summary : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| 1-methoxy-2-propanol | - | - | Readily |
| 1-pentanol | - | - | Readily |
| 2-dimethylaminoethanol | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|------------------------------|--------------------|-----|-----------|
| 1-methoxy-2-propanol | <1 | - | Low |
| propan-1-ol | 0.2 | - | Low |
| 1-pentanol | 1.51 | - | Low |
| 2-dimethylaminoethanol | -0.55 | - | Low |
| 3-aminopropyltriethoxysilane | 1.7 | 3.4 | Low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

SECTION 12: Ecological information

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Waste catalogue

| Waste code | Waste designation |
|------------|---|
| 08 01 19* | aqueous suspensions containing paint or varnish containing organic solvents or other hazardous substances |

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

| Type of packaging | Waste catalogue |
|-------------------|--|
| | 15 01 10* packaging containing residues of or contaminated by hazardous substances |

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|----------------|---|----------------|----------------|
| 14.1 UN number | Not regulated. | 9006 | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | - | - |
| 14.3 Transport hazard class(es) | - | 9 | - | - |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | Yes. | No. | No. |

Additional information

SECTION 14: Transport information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

| Product/ingredient name | List name | Name on list | Classification | Notes |
|-------------------------|-----------|--------------|----------------|-------|
| | | | | |

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = GB CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration

Permahyd® Hi-TEC Mixing Colour 480 WT 356 Medium Silver

SECTION 16: Other information

RRN = REACH Registration Number
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

| Classification | Justification |
|-------------------------|--------------------|
| Eye Dam. 1, H318 | Calculation method |
| Aquatic Chronic 3, H412 | Calculation method |

Full text of abbreviated H statements

| | |
|------|--|
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H228 | Flammable solid. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Full text of classifications

| | |
|-------------------|---|
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Eye Dam. 1 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 |
| Flam. Liq. 2 | FLAMMABLE LIQUIDS - Category 2 |
| Flam. Liq. 3 | FLAMMABLE LIQUIDS - Category 3 |
| Flam. Sol. 1 | FLAMMABLE SOLIDS - Category 1 |
| Skin Corr. 1B | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

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Notice to reader

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SECTION 16: Other information

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