

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 : 6922978663466
Product name : Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver
Product type : Liquid.
Other means of identification : Not available.
Date of issue/ Date of revision : 17 June 2024
Version : 1.14
Date of previous issue : 26 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 : 1.3 percent of the mixture consists of component(s) of unknown acute oral toxicity
1.3 percent of the mixture consists of component(s) of unknown acute dermal toxicity
1.3 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

Ingredients of unknown ecotoxicity : Contains 6.8% 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

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 : Not applicable.

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
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-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2	≤5	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
Isopropyl alcohol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0	≤5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
1-pentanol	REACH #: 01-2119491284-34	≤5	Flam. Liq. 3, H226 Acute Tox. 4, H332	[1]

SECTION 3: Composition/information on ingredients

2-dimethylaminoethanol	EC: 200-752-1 CAS: 71-41-0 Index: 603-200-00-1 REACH #: 01-2119492298-24 EC: 203-542-8 CAS: 108-01-0 Index: 603-047-00-0	<1	Skin Irrit. 2, H315 Eye Dam. 1, H318 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 Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1] [2]
N,N-dimethylisopropylamine	REACH #: 01-2119969062-37 EC: 213-635-5 CAS: 996-35-0	≤0.2	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 2, H411 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. Wash contaminated skin with soap and 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.

SECTION 4: First aid measures

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) 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
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
propan-1-ol	DNEL	Long term Oral	3.95 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	1037 mg/m ³	Workers	Systemic
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
Isopropyl alcohol	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
	DNEL	Long term Inhalation	500 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	51 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	178 mg/m ³	General population	Systemic
1-pentanol	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	1000 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	20 ppm	Workers	Systemic
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 8: Exposure controls/personal protection

2-dimethylaminoethanol	DNEL	Long term Inhalation	13 mg/m ³	General population	Local
	DNEL	Long term Inhalation	73.16 mg/m ³	Workers	Local
	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
	DNEL	Short term Inhalation	13.53 mg/m ³	Workers	Local
	N,N-dimethylisopropylamine	DNEL	Long term Inhalation	0.32 mg/m ³	General population
DNEL		Long term Inhalation	0.32 mg/m ³	General population	Systemic
DNEL		Long term Inhalation	3.6 mg/m ³	Workers	Local
DNEL		Long term Inhalation	3.6 mg/m ³	Workers	Systemic
DNEL		Short term Inhalation	7.2 mg/m ³	Workers	Local
DNEL		Short term Inhalation	7.2 mg/m ³	Workers	Systemic
DNEL		Long term Oral	0.33 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	3.3 mg/kg bw/day	General population	Systemic
DNEL		Long term Dermal	9.22 mg/kg bw/day	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Aluminium powder (stabilized)	Fresh water	0.0749 mg/l	-
	Sewage Treatment Plant	20 mg/l	-
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	-
1-methoxy-2-propanol	Fresh water	6.83 mg/l	-
	Marine water sediment	2.75 mg/kg	-
	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	-	

SECTION 8: Exposure controls/personal protection

Isopropyl alcohol	Fresh water	140.9 mg/l	-
	Marine water	140.9 mg/l	-
	Fresh water sediment	552 mg/kg	-
	Marine water sediment	552 mg/kg	-
	Soil	28 mg/kg	-
	Sewage Treatment Plant	2251 mg/kg	-
	1-pentanol	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	-
2-dimethylaminoethanol		Soil	1.068 mg/kg
	Fresh water	0.066 mg/l	-
	Marine water	0.007 mg/l	-
	Soil	0.01 mg/kg	-
	Sewage Treatment Plant	10 mg/l	-

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.

SECTION 8: Exposure controls/personal protection

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 : 82 to 100.1°C (179.6 to 212.2°F)

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Not available.

Not available.

Flash point : Closed cup: 37°C (98.6°F) [Product does not sustain combustion.]

Auto-ignition temperature : 270°C (518°F)

Decomposition temperature : Not applicable.

pH : 7 to 9

Viscosity : Dynamic (room temperature): 148 mPa·s
Kinematic (room temperature): 142 mm²/s
Kinematic (40°C): Not available.

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 : 2 kPa (14.7 mm Hg)

Relative density : Not available.

Density : 1.045 g/cm³

Vapour density : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Weight volatiles : 78.3 % (w/w)

VOC content : 17.2 % (w/w) (2010/75/EU)

SECTION 9: Physical and chemical properties

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.

Acute toxicity

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
propan-1-ol	LD50 Dermal	Rabbit	5040 mg/kg	-
	LD50 Oral	Rat	2200 mg/kg	-
1-methoxypropan-2-ol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
propan-2-ol	LC50 Inhalation Vapour	Rat - Male, Female	37.5 mg/l	4 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
pentan-1-ol	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	-
N,N-dimethylisopropylamine	LC50 Inhalation Gas.	Rat	2500 ppm	4 hours
	LD50 Oral	Rat	684 mg/kg	-

Acute toxicity estimates

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	318694.1	333.9	N/A
propan-1-ol	2200	5040	N/A	N/A	N/A
1-methoxy-2-propanol	6600	13000	N/A	N/A	N/A
Isopropyl alcohol	5000	12800	N/A	37.5	N/A
1-pentanol	3030	2860	N/A	11	N/A
2-dimethylaminoethanol	2000	1100	1641	N/A	N/A
N,N-dimethylisopropylamine	684	N/A	2500	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Human	-	47 hours 100 %	-
	Skin - Mild irritant	Human	-	24 hours 100 %	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	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	-
	Skin - Severe irritant	Rabbit	-	24 hours 3200 mg	-
	Eyes - Oedema of the conjunctivae	Rabbit	3	-	-
	Eyes - Severe irritant	Rabbit	-	5 uL	-
	Skin - Mild irritant	Rabbit	-	445 mg	-

Sensitisation

Mutagenicity

Carcinogenicity

Reproductive toxicity

Teratogenicity

Specific target organ toxicity (single exposure)

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 11: Toxicological information

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

Specific target organ toxicity (repeated exposure)

Not available.

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.

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 11: Toxicological information

Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
-	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
-	Acute LC50 3800000 µg/l Marine water	Fish - Bleak - <i>Alburnus alburnus</i>	96 hours
-	Acute LC50 >21100 mg/l	Daphnia - Daphnia	48 hours
-	Acute LC50 ≥1000 mg/l	Fish - Trout	96 hours
-	Acute EC50 7550 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours
-	Acute LC50 1400000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - <i>Crangon crangon</i>	48 hours
-	Acute LC50 4200 mg/l Fresh water	Fish - Harlequinfish, red rasbora - <i>Rasbora heteromorpha</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
-	Acute EC50 98.37 mg/l	Daphnia	48 hours
-	Acute LC50 146.63 mg/l Fresh water	Fish	96 hours
-	EC50 5.38 mg/l	Algae - <i>Skeletonema costatum</i>	72 hours
-	EC50 38.4 mg/l	Daphnia	48 hours
-	LC50 31.6 mg/l	Fish - <i>Leucidus idus</i>	96 hours
-	Chronic NOEC 1.73 mg/l	Daphnia	21 days

Conclusion/Summary : Not available.

12.2 Persistence and degradability

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

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1-methoxy-2-propanol	-	-	Readily
1-pentanol	-	-	Readily
2-dimethylaminoethanol	-	-	Readily
N,N-dimethylisopropylamine	-	-	Not readily

SECTION 12: Ecological information**12.3 Bioaccumulative potential**

Product/ingredient name	LogP _{ow}	BCF	Potential
Propan-1-ol	0.2	-	Low
1-methoxy-2-propanol	<1	-	Low
Isopropyl alcohol	0.05	-	Low
1-pentanol	1.51	-	Low
2-dimethylaminoethanol	-0.55	-	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

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.

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

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

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.

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 15: Regulatory information

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
- 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.
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.
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
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Flam. Sol. 1	FLAMMABLE SOLIDS - Category 1
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Permahyd® Hi-TEC Mixing Colour 480 WT 359 bright silver

SECTION 16: Other information

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Notice to reader

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