

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : Macropoxy 646 Multi-Purpose Epoxy - Additive

Product code : M646A

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

Material uses : Paint or paint related material.

: Industrial use only.

1.3 Details of the supplier of the safety data sheet

Sherwin-Williams UK Limited - Protective & Marine
Coatings Division EMEA
Tower Works
Kestor Street
Bolton
BL2 2AL
United Kingdom
+44 (0) 1204 521771

The Sherwin-Williams Company
Inver France SAS
2 Rue Jean Revaus - BP 80088 - 79102
Thouars CEDEX
France

e-mail address of person responsible for this SDS : hse.pm.emea@sherwin.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : +353 1 809 2166 (08:00-22:00)

Supplier

Telephone number : +(44)-870-8200 418

Hours of operation : Emergency contact available 24 hours a day

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226

Skin Irrit. 2, H315

Eye Irrit. 2, H319

Skin Sens. 1, H317

Carc. 2, H351

STOT RE 1, H372

Aquatic Chronic 3, H412

SECTION 2: Hazards identification

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

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

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

: Danger

Hazard statements

: Flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements**Prevention**

: Obtain special instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapour. Do not eat, drink or smoke when using this product.

Response

: Not applicable.

Storage

: Not applicable.

Disposal

: Not applicable.

Hazardous ingredients

: crystalline silica, respirable powder
Epoxy Polymer
Methyl Isobutyl Ketone

Supplemental label elements

: Contains epoxy constituents. May produce an allergic reaction. FOR INDUSTRIAL USE ONLY

Special packaging requirements

Not applicable.

2.3 Other hazards

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 Mixture**

:

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type

SECTION 3: Composition/information on ingredients

crystalline silica, respirable powder Epoxy Polymer	EC: 238-878-4 CAS: 14808-60-7 REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥50 - ≤75 ≥10 - <25	STOT RE 1, H372 (inhalation) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1] [2]
Methyl Isobutyl Ketone	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	≤10	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	[1] [2]
Xylene, mixed isomers	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤3	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.	[1] [2]

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 or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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

SECTION 4: First aid measures

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. 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.

Ingestion may cause nausea, diarrhea and vomiting.

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.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Contains bis-[4-(2,3-epoxipropoxy)phenyl]propane. May produce an allergic reaction.

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.

See toxicological information (Section 11)

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media : Recommended: alcohol-resistant foam, carbon dioxide, powders.

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 : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

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.

Keep unnecessary and unprotected personnel from entering.

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".

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

: 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. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. 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. Do not allow to enter drains or watercourses.

Information on fire and explosion protection

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

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

SECTION 7: Handling and storage

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 in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. 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.

Contaminated absorbent material may pose the same hazard as the spilt product. Store in closed original container at temperatures between 5°C and 25°C.

7.3 Specific end use(s)

Recommendations

: Not available.

Industrial sector specific solutions

: Not available.

Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
crystalline silica, respirable powder	NAOSH (Ireland, 5/2021). Notes: U derived Occupational Exposure Limit Values; List of Carcinogenic Substances, Mixtures and Processes OELV-8hr: 0.1 mg/m ³ 8 hours. Form: respirable dust
Methyl Isobutyl Ketone	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 20 ppm 8 hours. OELV-8hr: 83 mg/m ³ 8 hours. OELV-15min: 50 ppm 15 minutes. OELV-15min: 208 mg/m ³ 15 minutes.
Xylene, mixed isomers	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 50 ppm 8 hours. OELV-8hr: 221 mg/m ³ 8 hours. OELV-15min: 100 ppm 15 minutes. OELV-15min: 442 mg/m ³ 15 minutes.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance

SECTION 8: Exposure controls/personal protection

documents for methods for the determination of hazardous substances will also be required.

- : Regular monitoring of all work areas should be carried out at all times, including areas that may not be equally ventilated.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Methyl Isobutyl Ketone	DNEL	Short term Inhalation	208 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Local
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m ³	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	155.2 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Inhalation	14.7 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	14.7 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population [Consumers]	Systemic
Xylene, mixed isomers	DNEL	Long term Oral	4.2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	108 mg/kg bw/day	General population [Human via the environment]	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	14.8 mg/m ³	General population [Human via the environment]	Systemic
	DNEL	Short term Inhalation	174 mg/m ³	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	174 mg/m ³	General population [Consumers]	Local
	DNEL	Short term Inhalation	174 mg/m ³	General population [Consumers]	Local

PNECs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
Methyl Isobutyl Ketone	Fresh water	0.6 mg/l	-
	Marine water	0.06 mg/l	-
	Sewage Treatment Plant	27.5 mg/l	-
	Fresh water sediment	8.27 mg/kg dwt	-
	Marine water sediment	0.83 mg/kg dwt	-
Xylene, mixed isomers	Soil	1.3 mg/kg dwt	-
	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Fresh water sediment	12.46 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Soil	2.31 mg/kg	-
	Marine water sediment	12.46 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.
 - : Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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. Contaminated work clothing should not be allowed out of the workplace. 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

Gloves

- : Wear suitable gloves tested to EN374.
- : Gloves for term exposure/splash protection (less than 10 min): Nitrile > 0.12 mm
Gloves for splash protection need to be changed immediately when in contact with chemicals.
Gloves for repeated or prolonged exposure (breakthrough time > 240 min.) When the hazardous ingredients in Section 3 contain any of the following: Aromatic solvents (Xylene, Toluene) or Aliphatic solvents or Mineral Oil use: Polyvinyl alcohol (PVA) gloves 0.2-0.3 mm Otherwise use: Butyl gloves > 0.3 mm For long term exposure or spills (breakthrough time > 480 min.): Use PE laminated gloves as under gloves
Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing.
The recommendation for the type or types of glove to use when handling this product is based on information from the following source: Solvent resin manufacturers and European Solvents Industry Group (ESIG).
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.

SECTION 8: Exposure controls/personal protection

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.

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.
- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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

- : Application methods:
Brush or roller. Approved/certified respirator with organic vapour cartridge. Filter type: A2 P2 (EN14387).
Manual spraying. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Environmental exposure controls

- : Do not allow to enter drains or watercourses.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

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	: Colourless.
Odour	: Solvent.
Odour threshold	: Not Available (Not Tested).
pH	: Not applicable.
Melting point/freezing point	: Not relevant/applicable due to nature of the product.
Initial boiling point and boiling range	: 113°C
Flash point	: Closed cup: 23°C [Pensky-Martens Closed Cup]
Evaporation rate	: 1.62 (butyl acetate = 1)
Flammability (solid, gas)	: Not relevant/applicable due to nature of the product.
Upper/lower flammability or explosive limits	: LEL: 1% (Xylene, mixed isomers) UEL: 7.5% (Methyl Isobutyl Ketone)
Vapour pressure	: 2.1 kPa (16 mm Hg)
Vapour density	: 3.45 [Air = 1]
Relative density	: 1.61

SECTION 9: Physical and chemical properties

Solubility(ies)	: Not relevant/applicable due to nature of the product.
Partition coefficient: <i>n</i>-octanol/ water	: Not relevant/applicable due to nature of the product.
Auto-ignition temperature	: Not relevant/applicable due to nature of the product.
Decomposition temperature	: Not relevant/applicable due to nature of the product.
Viscosity	: Kinematic (40°C): >20.5 mm ² /s
Explosive properties	: Under normal conditions of storage and use, hazardous reactions will not occur.
Oxidising properties	: Under normal conditions of storage and use, hazardous reactions will not occur.

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.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. 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.

Ingestion may cause nausea, diarrhea and vomiting.

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.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitizer and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Contains bis-[4-(2,3-epoxipropoxy)phenyl]propane. May produce an allergic reaction.

Acute toxicity

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Epoxy Polymer	LD50 Dermal	Rabbit	20 g/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-
Xylene, mixed isomers	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	61055.31 mg/kg
Inhalation (gases)	371882.36 ppm
Inhalation (vapours)	114.56 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Epoxy Polymer	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
Methyl Isobutyl Ketone	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 uL	-
	Eyes - Severe irritant	Rabbit	-	40 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Xylene, mixed isomers	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	100 %	-

Conclusion/Summary : Not available.

Sensitisation

No data available

Conclusion/Summary : Not available.

Mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Methyl Isobutyl Ketone	Category 3	-	Narcotic effects
Xylene, mixed isomers	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

Macropoxy 646 Multi-Purpose Epoxy - Additive

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SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
crystalline silica, respirable powder	Category 1	inhalation	-
Xylene, mixed isomers	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
Xylene, mixed isomers	ASPIRATION HAZARD - Category 1

Other information : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Methyl Isobutyl Ketone	Acute LC50 505000 µg/l Fresh water Chronic NOEC 78 mg/l Fresh water Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas Daphnia - Daphnia magna Fish - Pimephales promelas - Embryo	96 hours 21 days 33 days
Xylene, mixed isomers	Acute LC50 8500 µg/l Marine water Acute LC50 13400 µg/l Fresh water	Crustaceans - Palaemonetes pugio Fish - Pimephales promelas	48 hours 96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
No data available				

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methyl Isobutyl Ketone	-	-	Readily
Xylene, mixed isomers	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Xylene, mixed isomers	-	8.1 to 25.9	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.

SECTION 12: Ecological information

- 12.6 Other adverse effects** : No known significant effects or critical hazards.
- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 13: Disposal considerations

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.
- European waste catalogue (EWC)** : waste paint and varnish containing organic solvents or other hazardous substances 08 01 11*
- Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

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.
- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- European waste catalogue (EWC)** : packaging containing residues of or contaminated by hazardous substances 15 01 10*
- 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport Hazard Class(es)/ Label(s)	3 	3 	3 
14.4 Packing group	III	III	III

SECTION 14: Transport information

14.5 Environmental hazards	No.	No.	No.
Additional information	<u>Tunnel code</u> D/E	<u>Emergency schedules</u> F-E, S-E	-

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 applicable.

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

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

Other EU regulations

VOC content (2010/75/EU) : 12.1 w/w
196 g/l

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative
N/A = Not available

Key literature references and sources for data

: Regulation (EC) No. 1272/2008 [CLP]
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830
Directive 2012/18/EU, and relative amendments & additions
Directive 2008/98/EC, and relative amendments & additions
Directive 2009/161/EU, and relative amendments & additions
CEPE Guidelines

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

: H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

SECTION 16: Other information

Full text of classifications [CLP/GHS]	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
	Asp. Tox. 1	ASPIRATION HAZARD - Category 1
	Carc. 2	CARCINOGENICITY - Category 2
	Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
	Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
	Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
	Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1	SKIN SENSITISATION - Category 1
	STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
	STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
	STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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: If there is no previous validation date please contact your supplier for more information.

Version : 2

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become make themselves aware of and understand the data contained in this SDS and any hazards that may be associated with the product. This information is provided in good faith and believed to be accurate as of the effective date mentioned herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can may change later the composition, hazards and risks of the product. Products shall should not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to, the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for the use of the product are not under the manufacturer's control of the manufacturer; the customer/buyer/user is responsible to for determine determining the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS, without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be held responsible for SDSs obtained from any other source.