

# SAFETY DATA SHEET

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

### 1.1 Product identifier

**Product name** : MACROPOXY 646MR EPOXY PRIMER FINISH FLINT 00.A.09 BASE 10 LITRES

**Product code** : M646MRB

### 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 Dam. 1, H318

Skin Sens. 1, H317

STOT RE 2, H373

Asp. Tox. 1, H304

Aquatic Chronic 2, H411

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

## SECTION 2: Hazards identification

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.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.

### Precautionary statements

**Prevention**

: Wear protective gloves. Wear eye or face 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.

**Response**

: Collect spillage. IF SWALLOWED: Immediately call a POISON CENTER or doctor.

**Storage**

: Not applicable.

**Disposal**

: Not applicable.

**Hazardous ingredients**

: Methylstyrenated Phenolic Resin  
Xylene, mixed isomers  
Polyamide  
Triethylene Tetramine

**Supplemental label elements**

: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. FOR INDUSTRIAL USE ONLY

### Special packaging requirements

Not applicable.

### 2.3 Other hazards

This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Other hazards which do not result in classification**

: None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixture

:

### SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Methylstyrenated Phenolic Resin	REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1	≥10 - ≤25	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412	-	[1] [3]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≥10 - <25	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
Xylene, mixed isomers	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - <20	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 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (gases)] = 6700 ppm	[1] [2]
Polyamide	CAS: 68410-23-1	≤10	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	-	[1]
Ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
Triethylene Tetramine	EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5	<1	Repr. 2, H361fd	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg	[1]
2-Ethyl-2-(hydroxymethyl)-1,3-propanediol	REACH #: 01-2119486799-10 EC: 201-074-9 CAS: 77-99-6	≤0.3	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 health or environmental hazard

[2] Substance with a workplace exposure limit

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

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** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- 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. 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**

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.

Contains 3,6-diazaoctanethylenediamin. 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, CO<sub>2</sub>, powders, water spray or mist.
- Unsuitable extinguishing media** : Do not use water jet.

### **5.2 Special hazards arising from the substance or mixture**

## SECTION 5: Firefighting measures

- 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.

## SECTION 7: Handling and storage

### 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.

### 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.

### 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
Xylene, mixed isomers	<b>NAOSH (Ireland, 5/2021). [xylene mixed isomers] Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 50 ppm 8 hours. OELV-8hr: 221 mg/m <sup>3</sup> 8 hours. OELV-15min: 100 ppm 15 minutes. OELV-15min: 442 mg/m <sup>3</sup> 15 minutes.
Ethylbenzene	<b>NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 100 ppm 8 hours. OELV-8hr: 442 mg/m <sup>3</sup> 8 hours. OELV-15min: 200 ppm 15 minutes. OELV-15min: 884 mg/m <sup>3</sup> 15 minutes.

#### Biological exposure indices

**SECTION 8: Exposure controls/personal protection**

Product/ingredient name	Exposure indices
xylene	<b>NAOSH (Ireland, 1/2011) [Xylene]</b> BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.
ethylbenzene	<b>NAOSH (Ireland, 1/2011)</b> BMGV: Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question., ethylbenzene [in endexhaled air]. Sampling time: not critical. BMGV: 0.7 g/g creatinine [Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift at end of workweek.

- Recommended monitoring procedures** :
- 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 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
zinc oxide	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic
Xylene, mixed isomers	DNEL	Long term Dermal	212 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	125 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	221 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	442 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	65.3 mg/m <sup>3</sup>	General	Systemic

## SECTION 8: Exposure controls/personal protection

2-Ethyl-2-(hydroxymethyl)-1,3-propanediol	DNEL	Inhalation Short term	260 mg/m <sup>3</sup>	population General	Local
	DNEL	Inhalation Short term	174 mg/m <sup>3</sup>	population General	Systemic
	DNEL	Inhalation Long term Oral	1.5 mg/kg	population General	Systemic
	DNEL	Long term Dermal	0.94 mg/kg	population Workers	Systemic
	DNEL	Long term Inhalation	3.3 mg/m <sup>3</sup>	Workers	Systemic

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
zinc oxide	Fresh water	0.0206 mg/l	-
	Marine water	0.0061 mg/l	-
	Sewage Treatment Plant	0.1 mg/l	-
	Fresh water sediment	117.8 mg/kg dwt	-
	Marine water sediment	56.5 mg/kg dwt	-
	Soil	35.6 mg/kg dwt	-

### 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).



## SECTION 8: Exposure controls/personal 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.  
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** :
- Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: A2P2 (EN14387). Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- 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** : White.
- Odour** : Solvent.
- Odour threshold** : Not Available (Not Tested).
- pH** : Not relevant/applicable due to nature of the product.  
insoluble in water.
- Melting point/freezing point** : Not relevant/applicable due to nature of the product.
- Initial boiling point and boiling range** : 136°C

**SECTION 9: Physical and chemical properties**

<b>Flash point</b>	: Closed cup: 33°C [Pensky-Martens Closed Cup]
<b>Evaporation rate</b>	: 0.8 (butyl acetate = 1)
<b>Flammability</b>	: Flammable liquid.
<b>Lower and upper explosion limit</b>	: LEL: 1% (Xylene, mixed isomers) UEL: 7% (Xylene, mixed isomers)
<b>Vapour pressure</b>	: 0.95 kPa (7.1 mm Hg)
<b>Relative vapour density</b>	: 3.66 [Air = 1]
<b>Relative density</b>	: 1.6
<b>Solubility(ies)</b>	:

Media	Result
cold water	Not soluble

**Partition coefficient: n-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<sup>2</sup>/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.

**Particle characteristics**

**Median particle size** : Not relevant/applicable due to nature of the product.

**9.2 Other information**

**Heat of combustion** : 4.929 kJ/g

**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 hazard classes as defined in Regulation (EC) No 1272/2008**

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.

Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Xylene, mixed isomers	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
Triethylene Tetramine	LD50 Dermal	Rabbit	805 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-
2-Ethyl-2-(hydroxymethyl)-1,3-propanediol	LD50 Oral	Rat	14000 mg/kg	-

**Acute toxicity estimates**

Route	ATE value
Dermal	8337.03 mg/kg
Inhalation (gases)	50780.07 ppm
Inhalation (vapours)	471.25 mg/l

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 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	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
Triethylene Tetramine	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	49 mg	-

SECTION 11: Toxicological information

	Skin - Severe irritant Skin - Severe irritant	Rabbit Rabbit	- -	490 mg 24 hours 5 mg	- -
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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
Xylene, mixed isomers	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Xylene, mixed isomers	Category 2	-	-
Ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

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

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 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.

**SECTION 12: Ecological information**

Product/ingredient name	Result	Species	Exposure
zinc oxide	Acute IC50 1.85 mg/l Marine water Acute LC50 98 µg/l Fresh water	Algae - <i>Skeletonema costatum</i> Daphnia - <i>Daphnia magna</i> - Neonate	96 hours 48 hours
Xylene, mixed isomers	Acute LC50 1.1 ppm Fresh water Acute LC50 8500 µg/l Marine water	Fish - <i>Oncorhynchus mykiss</i> Crustaceans - <i>Palaemonetes</i> <i>pugio</i>	96 hours 48 hours
Ethylbenzene	Acute LC50 13400 µg/l Fresh water Acute EC50 4900 µg/l Marine water Acute EC50 7700 µg/l Marine water Acute EC50 6.53 mg/l Marine water	Fish - <i>Pimephales promelas</i> Algae - <i>Skeletonema costatum</i> Algae - <i>Skeletonema costatum</i> Crustaceans - <i>Artemia</i> sp. - Nauplii	96 hours 72 hours 96 hours 48 hours
Triethylene Tetramine	Acute EC50 2.93 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
2-Ethyl-2-(hydroxymethyl)	Acute LC50 4200 µg/l Fresh water Acute LC50 33900 µg/l Fresh water Acute EC50 13000000 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i> Daphnia - <i>Daphnia magna</i> Daphnia - <i>Daphnia magna</i>	96 hours 48 hours 48 hours
-1,3-propanediol	Acute LC50 14400000 µg/l Marine water	Fish - <i>Cyprinodon variegatus</i>	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
Xylene, mixed isomers	-	-	Readily
Ethylbenzene	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
zinc oxide	-	28960	High
Xylene, mixed isomers	-	8.1 to 25.9	Low
2-Ethyl-2-(hydroxymethyl)	-	<1	Low
-1,3-propanediol			

**12.4 Mobility in soil****Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.**Mobility** : Not available.**12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Methylstyrenated Phenolic Resin	No	N/A	N/A	No	SVHC (Candidate)	Specified	Specified
xylene	No	N/A	No	Yes	No	N/A	No
Polyamide	No	N/A	N/A	No	N/A	N/A	N/A
3,6-diazaoctanethylenediamin	No	N/A	N/A	No	N/A	N/A	N/A
2-Ethyl-2-(hydroxymethyl)	No	N/A	No	Yes	No	N/A	No
-1,3-propanediol							

SECTION 12: Ecological information

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

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 or ID number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT. Marine pollutant (Zinc Oxide, Polyamide)	PAINT
14.3 Transport Hazard Class(es)/ Label(s)	3 <div></div>	3 <div></div>	3 <div></div>

**SECTION 14: Transport information**

<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Additional information</b>	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Tunnel code</b> D/E	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Emergency schedules</b> F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

**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 Maritime 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.

**Substances of very high concern**

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Methylstyrenated Phenolic Resin	vPvB	Candidate	-	-

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

Product/ingredient name	%	Designation [Usage]
MACROPOXY 646MR EPOXY PRIMER FINISH FLINT 00.A.09 BASE 10 LITRES	≥90	3
toluene	≤0.1	48
formaldehyde	<0.1	72
benzene	<0.1	5 72

**Labelling** : Not applicable.

**Other EU regulations**

**VOC content (2010/75/EU)** : 15.5 w/w  
249 g/l

**Explosive precursors** : Not applicable.

**Seveso Directive**

SECTION 15: Regulatory information

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) 2020/878 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	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements	: H225 H226 H302 H304 H312 H314 H315 H317 H318 H319 H332 H335 H361fd H373 H400	Highly flammable liquid and vapour. Flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life.
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**SECTION 16: Other information**

H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

<b>Full text of classifications [CLP/GHS]</b>	Acute Tox. 4	ACUTE TOXICITY - Category 4
	Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
	Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
	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
	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
	Repr. 2	REPRODUCTIVE TOXICITY - Category 2
	Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
	Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1	SKIN SENSITISATION - Category 1
	Skin Sens. 1B	SKIN SENSITISATION - Category 1B
	STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
	STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of printing** : 15, Apr, 2024.

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**Date of previous issue** : 28, Mar, 2024

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

**Version** : 6.01

**Notice to reader**

***In accordance with Regulation (EC) 1907/2006, REACH Regulation, Articles 31, 37, any required hazard-related information on the use of substances received as downstream user will be sent forward. Consequently, the safety data sheets for some products will contain a SUMI - Safe Use of Mixture Information - attached to the safety data sheet.***

**SUMI(s) will be added to the SDS for products if both the following conditions are met:**

- **The product is classified as hazardous for health**
- **The product contains one or more REACH-registered substances for which extended safety data sheets (exposure scenarios) have been provided**

***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***

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

**MACROPOXY 646MR EPOXY PRIMER FINISH FLINT 00.A.09 BASE 10 LITRES**

**M646MRB**

## **SECTION 16: Other information**

*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.*

SUMI

Safe Use of Mixtures

Information for end-users

Title : Formulation

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.

General description of the process covered

Formulation and (re)packing of substances and mixtures

Operational conditions

Place of use : Indoor use

Risk management measures (RMM)

Contributing activity	Process category (ies)	Maximum duration	Ventilation	
			Type	ach (air changes per hour)
Preparation of material for application	PROC05	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10
Loading of application equipment and handling of coated parts before curing	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10
Filling and transfer	PROC09	More than 4 hours	Local exhaust ventilation	Refer to relevant technical standards
Mixing operations	PROC05	More than 4 hours	Local exhaust ventilation	Refer to relevant technical standards
Cleaning	PROC05	More than 4 hours	Local exhaust ventilation	Refer to relevant technical standards
Waste management	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10

Contributing activity	Process category (ies)	Respiratory	Eye	Hands
Preparation of material for application	PROC05	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08b	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Filling and transfer	PROC09	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Mixing operations	PROC05	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Cleaning	PROC05	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08b	None	Use eye protection	Wear suitable gloves

Date of issue/Date of revision : 24, Nov, 2023Date of previous issue : No previous validationVersion 119/20

See chapter 8 of this Safety Data Sheet for specifications.



## Disclaimer

The information in this Safe Use of Mixture Information sheet is based on the data provided by the substance supplier for the substances in the product for which a chemical safety assessment has been carried out at the time of issue. It does not guarantee safe use of the product and does not replace any occupational risk assessment required by legislation. When developing workplace instructions for employees, SUMI sheets should always be considered in combination with the SDS and the label of the product.

No liability is accepted for any damage, no matter of what kind, which is direct or indirect consequence of acts and/or decisions (partly) based on the contents of this document.