

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : MACROPOXY M262 Epoxy Finish - Base

Product code : M262B

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

Asp. Tox. 1, H304

Aquatic Chronic 3, H412

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.

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

: Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful 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. Avoid breathing vapour.

Response

: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

Storage

: Not applicable.

Disposal

: Not applicable.

Hazardous ingredients

: 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane
Hydrocarbons, C9, aromatics
Reaction Product: Bisphenol-A-(Epichlorhydrin) Epoxy Resin (Number Average Molecular Weight 700-1100)
Formaldehyde (max.)

Supplemental label elements

: Contains epoxy constituents. May produce an allergic reaction.
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 does not contain any substances that are assessed to be a PBT or a vPvB.

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 |
|---|--|-----------|---|--|---|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8 | ≤13 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5% | [1]  |
| Hydrocarbons, C9, aromatics | REACH #: 01-2119455851-35 EC: 918-668-5 CAS: - | ≤11 | Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 | - | [1] |
| Reaction Product: Bisphenol-A-(Epichlorhydrin) Epoxy Resin (Number Average Molecular Weight 700-1100) | CAS: 25036-25-3 | ≥10 - ≤25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 | - | [1] |
| 1-Methoxy-2-propanol | REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3 | ≤7.7 | Flam. Liq. 3, H226 STOT SE 3, H336 | - | [1] [2] |
| Xylene, mixed isomers | REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 | ≤6.5 | 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 Aquatic Chronic 4, H413 | ATE [Dermal] = 1100 mg/kg ATE [Inhalation (gases)] = 6700 ppm | [1] [2] |
| Butylated Urea-Formaldehyde Polymer | CAS: 68002-19-7 | ≤3 | Repr. 2, H361fd | - | [1] |
| 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol | REACH #: 01-2119486799-10 EC: 201-074-9 CAS: 77-99-6 | ≤0.3 | | - | [1] |
| Formaldehyde (max.) | REACH #: 01-2119488953-20 EC: 200-001-8 CAS: 50-00-0 Index: 605-001-00-5 | <0.1 | Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 | ATE [Oral] = 100 mg/kg ATE [Dermal] = 270 mg/kg ATE [Inhalation (gases)] = 700 ppm Skin Corr. 1B, H314: C ≥ 25% Skin Irrit. 2, H315: 5% ≤ C < 25% Eye Dam. 1, H318: C ≥ 25% Eye Irrit. 2, H319: 5% ≤ C < 25% Skin Sens. 1, H317: C ≥ 0.2% | [1] [2] |
| | | | See Section 16 for the full text of the H statements declared above. | | |

SECTION 3: Composition/information on ingredients

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

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

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 sensitiser 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 reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), Reaction Product: Bisphenol-A-(Epichlorhydrin) Epoxy Resin (Number Average Molecular Weight 700-1100). May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|---|
| Notes to physician | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
|---------------------------|---|

SECTION 4: First aid measures

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, CO₂, powders, water spray or mist.

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).

SECTION 7: Handling and storage

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.

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 |
|-------------------------|---|
| 1-Methoxy-2-propanol | NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 100 ppm 8 hours. OELV-8hr: 375 mg/m ³ 8 hours. OELV-15min: 150 ppm 15 minutes. OELV-15min: 568 mg/m ³ 15 minutes. |
| Xylene, mixed isomers | NAOSH (Ireland, 5/2021). [xylene mixed isomers] 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. |
| Formaldehyde (max.) | NAOSH (Ireland, 5/2021). Sensitization potential. Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 0.3 ppm 8 hours. OELV-15min: 0.6 ppm 15 minutes. OELV-15min: 0.738 mg/m ³ 15 minutes. OELV-8hr: 0.37 mg/m ³ 8 hours. |

Biological exposure indices

| Product/ingredient name | Exposure indices |
|-------------------------|---|
| xylene | NAOSH (Ireland, 1/2011) [Xylene] BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. |

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 |
|-------------------------|------|-----------------------|-------------------------|--------------------------------|----------|
| 1-Methoxy-2-propanol | DNEL | Short term Inhalation | 553.5 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 369 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 183 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 43.9 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 78 mg/kg | General | Systemic |

SECTION 8: Exposure controls/personal protection

| | | | | | |
|---|------|--------------------------|------------------------------|---|----------|
| Xylene, mixed isomers | DNEL | Long term Oral | bw/day 33 mg/kg bw/day | population [Consumers] General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 212 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 125 mg/kg | General population | Systemic |
| | DNEL | Long term Inhalation | 221 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 289 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 442 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 65.3 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 260 mg/m ³ | General population | Local |
| | DNEL | Short term Inhalation | 174 mg/m ³ | General population | Systemic |
| | DNEL | Long term Oral | 1.5 mg/kg | General population | Systemic |
| 2-Ethyl-2-(hydroxymethyl) -1,3-propanediol | DNEL | Long term Dermal | 0.94 mg/kg | Workers | Systemic |
| | DNEL | Long term Inhalation | 3.3 mg/m ³ | Workers | Systemic |

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|---------------------------|------------|---------------|
| 1-Methoxy-2-propanol | Fresh water | 10 mg/l | - |
| | Fresh water sediment | 52.3 mg/kg | - |
| | Marine water sediment | 5.2 mg/kg | - |
| | Soil | 4.59 mg/kg | - |
| | Sewage Treatment Plant | 100 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

- : Wear suitable gloves tested to EN374.

Gloves

- :

SECTION 8: Exposure controls/personal protection

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.

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 | : Paint |
| 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 | : 120°C |
| Flash point | : Closed cup: 29°C [Pensky-Martens Closed Cup] |
| Evaporation rate | : 0.8 (butyl acetate = 1) |
| Flammability | : Flammable liquid. |
| Lower and upper explosion limit | : LEL: 0.7% (Light Aromatic Hydrocarbons) UEL: 13.74% (1-Methoxy-2-propanol) |
| Vapour pressure | : 1.5 kPa (10.9 mm Hg) |
| Relative vapour density | : 3.1 [Air = 1] |
| Relative density | : 1.5 |
| Solubility(ies) | : |

| Media | Result |
|------------|-------------|
| cold water | Not soluble |

Partition coefficient: n-octanol/ water : Not relevant/applicable due to nature of the product.

Auto-ignition temperature :

| Ingredient name | °C | °F | Method |
|----------------------|-----|-------|--------|
| 1-Methoxy-2-propanol | 286 | 546.8 | |

| | |
|--|---|
| 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. |
| <u>Particle characteristics</u> | |
| Median particle size | : Not relevant/applicable due to nature of the product. |

9.2 Other information

Heat of combustion : 9.291 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.

SECTION 10: Stability and reactivity

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.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser 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 reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700), Reaction Product: Bisphenol-A-(Epichlorhydrin) Epoxy Resin (Number Average Molecular Weight 700-1100). May produce an allergic reaction.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|----------------------|---------|-------------|----------|
| Hydrocarbons, C9, aromatics | LD50 Oral | Rat | 8400 mg/kg | - |
| 1-Methoxy-2-propanol | LD50 Dermal | Rabbit | 13 g/kg | - |
| | LD50 Oral | Rat | 6600 mg/kg | - |
| Xylene, mixed isomers | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol | LD50 Oral | Rat | 14000 mg/kg | - |
| Formaldehyde (max.) | LC50 Inhalation Gas. | Rat | 250 ppm | 4 hours |
| | LD50 Dermal | Rabbit | 270 mg/kg | - |
| | LD50 Oral | Rat | 100 mg/kg | - |

Acute toxicity estimates

SECTION 11: Toxicological information

| Route | ATE value |
|--------------------|----------------|
| Dermal | 19524.91 mg/kg |
| Inhalation (gases) | 118924.45 ppm |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--------------------------|---------|-------|-------------------|-------------|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 uL | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| Hydrocarbons, C9, aromatics | Eyes - Mild irritant | Rabbit | - | 24 hours 100 uL | - |
| 1-Methoxy-2-propanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| Xylene, mixed isomers | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| Formaldehyde (max.) | Skin - Mild irritant | Rat | - | 8 hours 60 uL | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Mild irritant | Human | - | 6 minutes 1 ppm | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 750 ug | - |
| | Eyes - Severe irritant | Rabbit | - | 750 ug | - |
| | Skin - Mild irritant | Human | - | 72 hours 150 ug l | - |
| | Skin - Mild irritant | Rabbit | - | 540 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 50 mg | - |
| | Skin - Severe irritant | Human | - | 0.01 % | - |
| | Skin - Severe irritant | Rabbit | - | 0.8 % | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 mg | - |

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)

SECTION 11: Toxicological information

| Product/ingredient name | Category | Route of exposure | Target organs |
|-----------------------------|------------|-------------------|------------------------------|
| Hydrocarbons, C9, aromatics | Category 3 | - | Respiratory tract irritation |
| 1-Methoxy-2-propanol | Category 3 | - | Narcotic effects |
| Xylene, mixed isomers | Category 3 | - | Narcotic effects |
| | 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 | - | - |

Aspiration hazard

| Product/ingredient name | Result |
|-----------------------------|--------------------------------|
| Hydrocarbons, C9, aromatics | ASPIRATION HAZARD - Category 1 |
| Xylene, mixed isomers | 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.

| Product/ingredient name | Result | Species | Exposure |
|---|---------------------------------------|--|----------|
| Xylene, mixed isomers | Acute LC50 8500 µg/l Marine water | Crustaceans - <i>Palaemonetes pugio</i> | 48 hours |
| 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol | Acute LC50 13400 µg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |
| | Acute EC50 13000000 µg/l Fresh water | Daphnia - <i>Daphnia magna</i> | 48 hours |
| Formaldehyde (max.) | Acute LC50 14400000 µg/l Marine water | Fish - <i>Cyprinodon variegatus</i> | 96 hours |
| | Acute EC50 3.48 mg/l Fresh water | Algae - <i>Desmodesmus subspicatus</i> | 72 hours |
| | Acute EC50 0.442 mg/l Marine water | Algae - <i>Ulva pertusa</i> | 96 hours |
| | Acute EC50 3.26 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> - Embryo | 48 hours |
| | Acute LC50 11.41 mg/l Fresh water | Crustaceans - <i>Ceriodaphnia dubia</i> | 48 hours |
| | Acute LC50 1.41 ppm Fresh water | Fish - <i>Oncorhynchus mykiss</i> | 96 hours |
| | Chronic NOEC 1000 µg/l Marine water | Algae - <i>Phyllospora comosa</i> - Embryo | 96 hours |
| | Chronic NOEC 3000 ppm Fresh water | Crustaceans - <i>Astacus astacus</i> - Egg | 21 days |
| | Chronic NOEC 1.56 mg/l Fresh water | Fish - <i>Oreochromis niloticus</i> - Fingerling | 12 weeks |

SECTION 12: Ecological information**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 |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-------------|-----------|
| 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane | - | 31 | Low |
| Hydrocarbons, C9, aromatics | - | 10 to 2500 | High |
| Xylene, mixed isomers | - | 8.1 to 25.9 | Low |
| 2-Ethyl-2-(hydroxymethyl)-1,3-propanediol | - | <1 | 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 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*

SECTION 13: Disposal considerations

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 | PAINT |
| 14.3 Transport Hazard Class(es)/ Label(s) | 3  | 3  | 3  |
| 14.4 Packing group | III | III | III |
| 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 Maritime transport in bulk according to IMO instruments : Not applicable.

SECTION 14: Transport information

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 on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| Product/ingredient name | % | Designation [Usage] |
|------------------------------------|-------|---------------------|
| MACROPOXY M262 Epoxy Finish - Base | ≥90 | 3 |
| formaldehyde | <0.1 | 72 |
| toluene | ≤0.1 | 48 |
| 4,4'-isopropylidenediphenol | <0.01 | 66 |

Labelling : Not applicable.

Other EU regulations

VOC content (2010/75/EU) : 26.3 w/w
393 g/l

Explosive precursors : Not applicable.

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

| Product/ingredient name | List name | Name on list | Classification | Notes |
|-------------------------|--------------------------------------|--------------|----------------|-------|
| Formaldehyde (max.) | Ireland Occupational Exposure Limits | formaldehyde | Carc..1B | - |

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

SECTION 16: Other information

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 Irrit. 2, H319 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| Asp. Tox. 1, H304 | 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.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
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.
H413 May cause long lasting harmful effects to aquatic life.
EUH066 Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS] : 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
Aquatic Chronic 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Asp. Tox. 1 ASPIRATION HAZARD - Category 1
Carc. 1B CARCINOGENICITY - Category 1B
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

SECTION 16: Other information

| | |
|---------------|---|
| Flam. Liq. 3 | FLAMMABLE LIQUIDS - Category 3 |
| Muta. 2 | GERM CELL MUTAGENICITY - Category 2 |
| 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 |
| 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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Date of previous issue : 21, Jan, 2024

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

Version : 9

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 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 : Industrial application of coatings and inks by other than spraying-Local exhaust ventilation

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

Paint application on industrial line by brush, roller, dipping, spreading, coil, fluidised bed or curtain coating (local exhaust ventilation only)

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 |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| 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. |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.



Disclaimer

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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.

SUMI

Safe Use of Mixtures

Information for end-users

Title : Professional application of coatings and inks by spraying-Outdoor

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

Outdoor spray painting by professionals for general applications (e.g. decorative)

Operational conditions

Place of use : Outdoor 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 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Professional application of coatings and inks by spraying | PROC11 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Cleaning | PROC05 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Waste management | PROC08a | 15 minutes to 1 hour | Outdoors | 3 - 5 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|------------------------|--|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings and inks by spraying | PROC11 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |

| | | | | |
|------------------|---------|------|---|---|
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
|------------------|---------|------|---|---|

See chapter 8 of this Safety Data Sheet for specifications.



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SUMI

Safe Use of Mixtures

Information for end-users

Title : Industrial spray painting, walk-in booth

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

Paint application on industrial line with walk-in spray booth

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 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| 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. |
| Industrial application of coatings and inks by spraying | PROC07 | Compressed-air breathing apparatus to EN 14594 with an assigned protection factor of at least 20. | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Application equipment | PROC05 | None | Use eye protection | Wear suitable gloves |

Date of issue/Date of revision : ***

Date of previous issue : No previous validation Version 1 23/36

| | | | | |
|------------------------|---------|------|---|---------------------------------------|
| cleaning outside booth | | | according to EN 166. | tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.



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SUMI

Safe Use of Mixtures

Information for end-users

Title : Industrial spray painting, no booth

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

Paint application on industrial line with no enclosure (only local exhaust ventilation)

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 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| 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. |
| Industrial application of coatings and inks by spraying | PROC07 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.



Disclaimer

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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.

SUMI

Safe Use of Mixtures

Information for end-users

Title : Industrial application of coatings and inks by other than spraying-Enclosed

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

Paint application on industrial line by brush, roller, dipping, spreading, coil, fluidised bed or curtain coating (enclosed application)

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 |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC02 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| 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. |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | None | None | None |
| Film formation - force drying, stoving and other technologies | PROC02 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

Date of issue/Date of revision : ***

Date of previous issue : No previous validation Version 1 27/36

| | | | | |
|---|---------|------|--|--|
| Application equipment cleaning outside booth | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.



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SUMI

Safe Use of Mixtures

Information for end-users

Title : Professional application of coatings and inks by spraying-Indoor

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

Indoor spray painting by professionals for general applications (e.g. decorative), with general room ventilation only (open doors/windows)

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 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Professional application of coatings and inks by spraying | PROC11 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Cleaning | PROC05 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Waste management | PROC08a | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|------------------------|--|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings and inks by spraying | PROC11 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' |

| | | | | |
|------------------|---------|------|---|---|
| Waste management | PROC08a | None | Use eye protection according to EN 166. | employee training. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
|------------------|---------|------|---|---|

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SUMI

Safe Use of Mixtures

Information for end-users

Title : Professional painting, outdoor brush/roller

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

Outdoor painting by professionals with brush or roller

Operational conditions

Place of use : Outdoor 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 | Outdoors | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | More than 4 hours | Outdoors | 3 - 5 |
| Professional application of coatings and inks by brush or roller | PROC10 | More than 4 hours | Outdoors | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Outdoors | 3 - 5 |
| Cleaning | PROC05 | More than 4 hours | Outdoors | 3 - 5 |
| Waste management | PROC08a | More than 4 hours | Outdoors | 3 - 5 |

| 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 | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Professional application of coatings and inks by brush or roller | PROC10 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

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SUMI

Safe Use of Mixtures

Information for end-users

Title : Professional painting, indoor brush/roller

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

Indoor painting by professionals with brush or roller, with good general room ventilation (open doors/windows)

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 | Good general room ventilation | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | More than 4 hours | Good general room ventilation | 3 - 5 |
| Professional application of coatings and inks by brush or roller | PROC10 | More than 4 hours | Good general room ventilation | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Good general room ventilation | 3 - 5 |
| Cleaning | PROC05 | More than 4 hours | Good general room ventilation | 3 - 5 |
| Waste management | PROC08a | More than 4 hours | Good general room ventilation | 3 - 5 |

| 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 | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Professional application of coatings and inks by brush or roller | PROC10 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

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SUMI

Safe Use of Mixtures

Information for end-users

Title

: Industrial spray painting, enclosed

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

Paint application on industrial line with fully-enclosed spraying

Operational conditions

Place of use

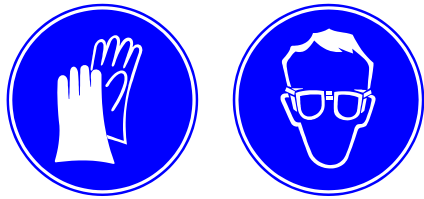
: Indoor use

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 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Full containment/extraction | 100 or equivalent |
| Film formation - force drying, stoving and other technologies | PROC02 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| 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. |
| Industrial application of coatings and inks by spraying | PROC07 | None | None | None |
| Film formation - force drying, stoving and other technologies | PROC02 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Application equipment cleaning outside booth | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Date of issue/Date of revision | | : *** | | |
| Date of previous issue | | : No previous validation | | |
| Version | | 1 | | |
| | | 35/36 | | |

| MACROPOXY M262 Epoxy Finish - Base | | | Industrial spray painting, enclosed | |
|------------------------------------|---------|------|---|---------------------------------------|
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

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