

SAFETY DATA SHEET

“MEDAL EPOXY FLOOR PAINT”

1. Identification of the substance/preparation and of the company/undertaking

Product Name

MEDAL EPOXY FLOOR PAINT

COMPANY DETAILS

Company Name: MEDAL PAINTS (PTY) LTD
Address: CNR MAIN REEF & KELVIN ROADS
INDUSTRIA
SOUTH AFRICA

Contact Numbers: Tel: (011) 661-5700 Fax: (011) 661-5701

2. Composition/information on ingredients

Component Amount Classification: CAS # EC #

Reaction product:

bisphenol-A-

(epichlorhydrin) epoxy

resin (number average

molecularweight <= 700)

100.0 % Xi: R36/38; R43; N:

R51, R53

25068-38-6 500-033-5

See Section 16 for full text of R-phrases.

3. Hazards Identification

Irritating to eyes and skin.

May cause sensitization by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Ingestion: No emergency medical treatment necessary.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive -pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

Recommended pumping and storage temperature for bulk shipments is 60°C (140°F) Additional storage and handling information on this product may be obtained by calling your Dow sales or customer service contact. Ask for a product brochure.

Shelf life: Use within Storage temperature:

24 Months 2 - 43 °C

8. Exposure Controls / Personal Protection

Exposure Limits

None established

Personal Protection

Eye/Face Protection: Use safety glasses. Safety glasses should be consistent with Directive 89/686/EEC Category 2.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile. Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: No respiratory protection should be needed.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Good general ventilation should be sufficient for most conditions.

9. Physical and Chemical Properties

Physical State : 2 pack floor coating

Color Grey & Green

Odor Mild

Flash Point - Closed Cup 252 °C *PMCC, ASTM D93*

Flammable Limits In Air Lower: Not applicable

Upper: Not applicable

Autoignition Temperature Not applicable

Vapor Pressure Not applicable

Boiling Point (760 mmHg) Not applicable

Vapor Density (air = 1) Not applicable

Specific Gravity (H₂O = 1) 1.16 *Literature*

Liquid Density 1.156 - 1.166 g/cm³ @ 25 °C *ASTM D4052*

Freezing Point Not Determined

Melting Point Not Determined

Solubility in Water (by weight)

Insoluble

pH Not Determined

Viscosity (Krebs Units) 70 – 75 **Kus (Mixed)** @ 25 °C *ASTM D445*

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7.

Conditions to Avoid: Avoid temperatures above 300°C (572°F) Potentially violent decomposition can occur above 350°C (662°F) Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.

Hazardous Polymerization

Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

11. Toxicological Information

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat > 5,000 mg/kg

Eye Contact

May cause slight temporary eye irritation. Corneal injury is unlikely.

Skin Contact

Prolonged exposure not likely to cause significant skin irritation. Repeated contact may cause skin irritation with local redness.

Skin Absorption

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

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LD50, Rabbit 20,000 mg/kg

Inhalation

Vapors are unlikely due to physical properties.

Sensitization

Skin

Has caused allergic skin reactions in humans. Did not cause allergic skin reactions when tested in mice.

Repeated Dose Toxicity

Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Chronic Toxicity and Carcinogenicity

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

Developmental Toxicity

Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

Reproductive Toxicity

In animal studies, did not interfere with reproduction.

Genetic Toxicology

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

12. Ecological Information

CHEMICAL FATE

Movement & Partitioning

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Potential for mobility in soil is low (Koc between 500 and 2000).

Henry's Law Constant (H): < 6.94E -09 atm*m3/mole; 25 °C Estimated

Partition coefficient, soil organic carbon/water (Koc): 1,800 - 4,400 Estimated 1,800 - 4,400
Estimated

Persistence and Degradability

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

OECD Biodegradation Tests:

Biodegradation Exposure Time Method

12 % 28 d OECD 302B Test

ECOTOXICITY

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*), 96 h: 3.1 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, 48 h, immobilization: 1.4 - 1.7 mg/l

Toxicity to Micro-organisms

IC50; bacteria, Growth inhibition, 18 h: > 42.6 mg/l

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Aquatic

Invertebrates

Chronic

Toxicity Value:

ChV Value mg/l

Species Test Type Endpoint Exposure Time

0.55 mg/l water flea

Daphnia magna

number of offspring

21 d

13. Disposal Considerations

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 91/689/EEC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

14. Transport Information

ROAD & RAIL

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

Classification: M6

Kemler Code: 90

Tremcard Number: 90GM6-III

OCEAN

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

EMS Number: F-A,S-F

Marine pollutant.: No

AIR

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

Cargo Packing Instruction: 914

Passenger Packing Instruction: 914

INLAND WATERWAYS

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)

Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

Classification: M6

Kemler Code: 90

Tremcard Number: 90GM6-III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)

Components of this product are not listed on EINECS because they are polymers or "no-longer polymers" marketed before the enforcement of the 7th Amendment to Directive 67/548/EEC.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Classification and User Label Information

Hazard Symbol :

Xi - Irritant.

N - Dangerous for the environment.

Risk Phrases :

R36/38 - Irritating to eyes and skin.

R43 - May cause sensitization by skin contact.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases :

S24 - Avoid contact with skin.

S28 - After contact with skin, wash immediately with plenty of water and soap.

S37/39 - Wear suitable gloves and eye/face protection.

S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.

Chemical

Name

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight <= 700)

(EC Label -- EC # 500-033-5)

Contains epoxy constituents. See information supplied by the manufacturer.

- Other regulations

Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight <= 700) can also be described by the CAS# 025085-99-8.

16. Other Information

Risk-phrases in Section 2

R36/38 Irritating to eyes and skin.

R43 May cause sensitization by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A Not available

W/W Weight/Weight

OEL Occupational Exposure Limit

STEL Short Term Exposure Limit

TWA Time Weighted Average

ACGIH American Conference of Governmental Industrial Hygienists, Inc.

DOW IHG Dow Industrial Hygiene Guideline

WEEL Workplace Environmental Exposure Level

HAZ_DES Hazard Designation

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