

POLYURETHANE RESIN MP-108

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

I IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

| PRODUCT NAME: | POLYURETHANE RESIN MP-108 | |
|-----------------------|---|---------------------------|
| PART NO.: | MP-108 | |
| APPLICATIONS: | Sealant | |
| USES ADVISED AGAINST: | No specific uses advised against are iden | tified |
| SUPPLIER: | Steve Vick International Limited 19 Treenwood Industrial Estate Bradford on Avon BA15 2AU Tel 01225 864 864 | email: info@stevevick.com |

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2 HAZARD IDENTIFICATION

| 2.1 Classification of the substance or Classification (EC 1272/2008) | mixture |
|---|--|
| Physical Hazards | Not Classified |
| Health Hazards | Not Classified |
| Environmental Hazards | Not Classified |
| Human Health | See section 11 for additional information on health hazards. |
| Environment | This product is not expected to be hazardous to the environment. |
| 2.2 Label Elements | |
| Hazard Statements | NC Not Classified |
| 2.3 Other Hazards | |

This product does not contain any substances classified as PBT or v P v B

<u>3 COMPOSITION / INFORMATION ON INGREDIENTS</u>

3.2 Mixtures

| Tris(2-chloroisopropyl)phosphate | | 10-30% |
|----------------------------------|----------------------|--------|
| CAS number: 13674-84-5 | EC number: 237-158-7 | |
| | | |
| Classification | | |
| Acute Tox 4 – H302 | | |
| | | |

The full text for all hazard statements is displayed in section 16.

Composition comments

This product does not contain any hazardous ingredients, or ingredients with national workplace exposure limits.





4 FIRST AID MEASURES

4.1 Description of first aid measures **GENERAL INFORMATION:** Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel. INHALATION: Move effected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. INGESTION: Rinse mouth thoroughly with water. Give a few small glasses or water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. SKIN: Remove affected person from source of contamination. Rinse immediately with plenty of water. EYES: Remove any contact lenses & open eyelids wide apart. Rinse immediately with plenty of water for at least 10min. PROTECTION FOR FIRST AIDERS: First aid personnel should wear appropriate protective equipment during any rescue. 4.2 Most important symptoms and effects, both acute and delayed **GENERAL INFORMATION** See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. INHALATION Prolonged inhalation of high concentrations may damage respiratory system. INGESTION Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation. **SKIN CONTACT** Prolonged contact may cause dryness of the skin EYE CONTACT May cause temporary eye irritation. 4.3. Indication of any immediate medical attention and special treatment needed Notes for the doctor Treat symptomatically. Specific treatments No special treatment required

5 FIRE FIGHTING MEASURES

| 5.1 Extinguishing media: | | |
|---|---|--|
| Suitable extinguishing media: | The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire extinguishing media suitable for the surrounding fire. | |
| Unsuitable extinguishing media: | Do not use water jet as an extinguisher, as this will spread the fire. | |
| 5.2 Special hazards arising from the substance or mixture | | |
| Specific hazards | Containers can burst violently or explode when heated, due to excessive pressure build-up. | |
| Hazardous combustion products | Thermal decomposition or combustion products may include the following substances. Harmful gases or vapours. | |

5.3. Advice for fire fighters

Protective actions during fire fighting

Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

Special protective equipment for fire fighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.



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6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions

Environmental precautions

Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. For waste disposal, see Section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Usage precautions:

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2 Conditions for safe storage, including any incompatibilities

| Storage precautions: | Store away from incompatible materials (See section 10). Store in accordance with local regulations. |
|-------------------------|--|
| Storage Class | Unspecified storage |
| 7.3 Specific end use(s) | |
| Specific end use(s): | The identified uses for this product are detailed in Section 1.2 |
| Usage description: | Polyurethane resin for use with diisocyanate hardener. |

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1. Control parameters Occupational exposure limits ETHANE-1,2-diol

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m³ vapour Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m³ vapour Sk

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate Sk

WEL = Workplace Exposure Limit Sk = Can be absorbed through the skin.

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8.2. Exposure controls

Protective Equipment



Appropriate engineering controls

Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard ENI66. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. For exposure up to 4 hours, wear gloves made of the following material: Nitrile rubber. Thickness: ≥ 0.13 mm

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Combination filter, type A2/P2.

Environmental exposure controls

Not regarded as dangerous for the environment.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| Appearance | Creamy liquid. | |
|--------------------------------------|---|--|
| Colour | Pink. | |
| Odour | Mild. | |
| Odour threshold | Not determined. | |
| pН | Not determined. | |
| Melting point | Not determined. | |
| Initial boiling point and range | Not determined. | |
| Flash point | > 100°C Closed cup. | |
| Evaporation rate | Not determined. | |
| Evaporation factor | Not determined. | |
| Upper/lower flammability or explosiv | e limits Not determined. | |
| Vapour pressure | Not determined. | |
| Vapour density | Not determined. | |
| Relative density | I.I8 @ 20°C | |
| Bulk density | Not determined. | |
| Solubility(ies) | Slightly soluble in water. | |
| Partition coefficient | Not determined. | |
| Auto-ignition temperature | > 250°C | |
| Decomposition Temperature | Not determined. | |
| Viscosity | 5000 mPa s @ 25°C | |
| Explosive properties | Not determined. | |
| Oxidising properties | Does not meet the criteria for classification as oxidising. | |





Other Information Not Known

10 STABILITY AND REACTIVITY

10.1 Reactivity

See the other subsections of this section for further details.

10.2 Chemical stability

Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

No potentially hazardous reactions known

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Acids. Oxidising agents.

10.5 Incompatible materials

Materials to avoid - Strong acids. Strong oxidising agents.

10.6 Hazardous decomposition products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

| Toxicological effects | Not regarded as a health hazard under current legislation. |
|--|--|
| <u>Acute toxicity – oral.</u> Notes (oral LD ₅₀) ATE oral (mg/kg) | Based on available data the classification criteria are not met. 6,543.31 |
| <u>Acute toxicity – dermal</u> Notes (dermal LD ₅₀) | Based on available data the classification criteria are not met. |
| <u>Acute toxicity – inhalation</u> Notes (inhalation LC ₅₀) | Based on available data the classification criteria are not met. |
| <u>Skin corrosion/irritation</u> Animal data | Based on available data the classification criteria are not met. |
| <u>Serious eye damage/irritation</u> Serious eye damage/irritation | Based on available data the classification criteria are not met. |
| <u>Respiratory sensitisation</u> Respiratory sensitisation | Based on available data the classification criteria are not met. |
| <u>Skin sensitisation</u> Skin sensitisation | Based on available data the classification criteria are not met. |
| <u>Germ cell mutagenicity</u> Genotoxicity - in vitro Genotoxicity - in vivo | Based on available data the classification criteria are not met. Based on available data the classification criteria are not met. |
| <u>Carcinogenicity</u> Carcinogenicity IARC carcinogenicity | Based on available data the classification criteria are not met. None of the ingredients are listed or exempt. |
| <u>Reproductive toxicity</u> Reproductive toxicity - fertility Reproductive toxicity – development | Based on available data the classification criteria are not met. Based on available data the classification criteria are not met. |
| Specific target organ toxicity - single organ toxicity - single or STOT - single exposure | exposure Not classified as a specific target organ toxicant after a single exposure. |
| Specific target organ toxicity - repeat STOT - repeated exposure | <u>ed exposure</u> Not classified as a specific target organ toxicant after repeated exposure. |

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.



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| Aspiration hazard Aspiration hazard | Based on available data the classification criteria are not met. |
|--|---|
| General information | No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. |
| Inhalation | Prolonged inhalation of high concentrations may damage respiratory system. |
| Ingestion | Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation. |
| Skin contact | Prolonged contact may cause dryness of the skin. |
| Eye contact | May cause temporary eye irritation. |
| Route of exposure | Ingestion Inhalation Skin and/or eye contact |
| Target organs | No specific target organs known. |

Toxicological information on ingredients.

Ethane-1,2-diol Acute toxicity - oral Notes (oral LD₅₀) Harmful if swallowed. ATE oral (mg/kg) 500.0 Acute toxicity - dermal > 3500 mg/kg Rabbit REACH dossier information. Notes (dermal LD₅₀) Skin corrosion/irritation Dose: 0.5ml, 23 hr, Rabbit Primary dermal irritation index: 0 REACH dossier information. Not corrosive to skin. Animal data Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Skin sensitisation Germ cell mutagenicity Genotoxicity - in vitro Genotoxicity - in vivo Gene mutation: Negative. REACH dossier information. Chromosome aberration: Negative. REACH dossier information **Carcinogenicity** NOAEL 1500 mg/kg/day, Oral, Mouse Weight of evidence. REACH dossier information. Carcinogenicity **Reproductive toxicity** Three-generation study - NOAEL > 1000 mg/kg/day, Oral, Mouse P Estimated value. Weight of evidence. Reproductive toxicity - fertility REACH dossier information. Developmental toxicity: - NOAEC: 1000 mg/kg/day, Inhalation, Rat REACH dossier information. Reproductive toxicity - development

Specific target organ toxicity - single exposure STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

NOAEL 150 mg/kg, Oral, Rat REACH dossier information. STOT - repeated exposure

12 ECOLOGICAL INFORMATION

Ecotoxicity

Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity Toxicity

Based on available data the classification criteria are not met

Ecological information on ingredients.

Ethane-1,2-diol

| <u>Acute aquatic toxicity</u> | LC ₅₀ , 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow) |
|-------------------------------|--|
| Acute toxicity - fish | REACH dossier information. |
| Acute toxicity - | FC == 48 hours: > 100 mg/L Daphnia magna |

REACH dossier information. aquatic invertebrates



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EC₅₀, 96 hours: > 6500 mg/l, Freshwater algae REACH dossier information.

12.2. Persistence and degradability

Acute toxicity aquatic plants

Persistence and degradability This product is not readily biodegradable.

Ecological information on ingredients.

Ethane-1,2-diol

| Phototransformation Biodegradation | Water - DT ₅₀ : 46.3 hours Estimated value. REACH dossier information. Water - Degradation (%) 90: 10 days REACH dossier information. The substance is readily biodegradable. | |
|---|---|--|
| 12.3. Bioaccumulative potential | | |
| Bioaccumulative potential | The product does not contain any substances expected to be bioaccumulating. | |
| Partition coefficient | Not determined. | |
| Ecological information on ingredients. Ethane-1,2-diol | | |
| B ioaccumulative potential | No data available on bioaccumulation. | |
| Partition coefficient | log Pow: -1.36 REACH dossier information. | |

12.4. Mobility in soil

| Mobility | Mobile |
|----------|--------|
| | |

Ecological information on ingredients.

Ethane-1,2-diol

Ethane-1,2-diol

| Mobility | Miscible with water. |
|--------------------------------------|---|
| Adsorption/desorption coefficient | Koc: I Calculation method. REACH dossier information. |
| Henry's law constant | 0.1327 Pa m3/mol @ 25°C Estimated value. REACH dossier information. |

12.5. Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Results of PBT and vPvB This substance is not classified as PBT or vPvB according to current EU criteria. assessment

12.6. Other adverse effects

Other adverse effects

None known.

13 DISPOSAL CONSIDERATIONS

| <u>13.1. Waste treatment methods</u> General information | The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. |
|---|---|
| Disposal methods | Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Waste packaging should be collected for reuse or |
| | |



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recycling. Incineration or landfill should only be considered when recycling is not feasible. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

14 TRANSPORT INFORMATION

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1 UN number Not applicable.

14.2 UN proper shipping name Not applicable.

14.3 Transport hazard class(es) No transport warning sign required.

Transport labels No transport warning sign required

14.4 Packing group Not applicable.

14.5 Environmental hazards Environmentally hazardous substance/marine pollutant - No.

14.6 Special precautions for user Not applicable.

 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

 Transport in bulk according to
 Not applicable.

 Annex II of MARPOL 73/78
 Not applicable.

 and the IBC Code
 Not applicable.

15 REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

| National regulations | Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure equipment Regulations 2009 (SI 2009 No. |
|----------------------|---|
| | 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits. |
| EU legislation | Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). |

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

16 OTHER INFORMATION

| Abbreviations and acronyms used in the safety data sheet | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate. LC₅₀: Lethal Concentration to 50 % of a test population. LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose). EC₅₀: 50% of maximal Effective Concentration. |
|---|--|
| | |





| | vPvB: Very Persistent and Very Bioaccumulative. |
|--|--|
| Key literature references and sources for data | Source: European Chemicals Agency, http://echa.europa.eu/ |
| Classification procedures according to Regulation (EC) 1272/2008 | Not classified.: Calculation method. |
| Training advice | Read and follow manufacturer's recommendations. Only trained personnel should use this material. |
| Revision date | 13/06/2018 |
| Revision | 3 |
| Supersedes date | 01/02/2017 |
| SDS number | 10254 |
| Hazard statements in full | H302 Harmful if swallowed. |

PBT: Persistent, Bioaccumulative and Toxic substance.

DISCLAIMER

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS, TO THE BEST OF THE COMPANY'S KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO WARRANTY, GUARANTEE OR REPRESENTATION IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

