TW Engineered Polymers

SAFETY DATA SHEET MA300 ADHESIVE.

| SECTION 1: Identification of the substance/mixture and of the company/undertaking | | | |
|--|--|--|--|
| 1.1. Product identifier | | | |
| Product name | MA300 ADHESIVE. | | |
| REACH registration notes | CAS 80-62-6: 01-2119452498-28-XXXX CAS 79-41-4: 01-2119463884-26-XXXX | | |
| 1.2. Relevant identified uses of the substance or mixture and uses advised against | | | |
| Identified uses | Adhesive. | | |
| 1.3. Details of the supplier of the safety data sheet | | | |
| Supplier | | | |
| | ITW Engineered Polymers | | |
| | Bay 150 | | |
| | Shannon Industrial Estate | | |
| | Shannon | | |
| | Co. Clare | | |
| | +353 (0)61 471 299 | | |
| | +353 (0)61 471 285 | | |
| | mail@itwep.com | | |
| 1.4. Emergency telephone nun | nber | | |
| Emergency telephone | +44(0)1235 239 670 (24h) | | |
| SECTION 2: Hazards identifica | ation | | |
| 2.1. Classification of the substa | ance or mixture | | |
| Classification (EC 1272/2008) | | | |
| Physical hazards | Flam. Liq. 2 - H225 | | |
| Health hazards | Skin Irrit. 2 - H315 Skin Sens. 1 - H317 STOT SE 3 - H335 | | |
| Environmental hazards | Not Classified | | |
| | | | |
| Classification (67/548/EEC or 1999/45/EC) | Xi;R37,R38. R43. F;R11. | | |
| 2.2. Label elements | | | |
| Pictogram | | | |
| | | | |
| Signal word | Danger | | |
| Hazard statements | H225 Highly flammable liquid and vapour. H315 Causes skin irritation. | | |

H335 May cause respiratory irritation.

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| Precautionary statements | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P332+P313 If skin irritation occurs: Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations. |
|--|--|
| Contains | METHYL METHACRYLATE, METHACRYLIC ACID, bis[4-(2,3- EPOXYPROPOXY)PHENYL]PROPANE |
| Supplementary precautionary statements | P240 Ground/ bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/ doctor if you feel unwell. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. |

2.3. Other hazards

Г

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

| SECTION 3: Composition/information on ingredients | | | |
|---|----------------------|--------------------------------|--|
| 3.2. Mixtures | | | |
| METHYL METHACRYLATE | | 60-100% | |
| CAS number: 80-62-6 | EC number: 201-297-1 | REACH registration number: 01- | |
| | | 2119452498-28-0000 | |
| Classification | Classificatio | on (67/548/EEC or 1999/45/EC) | |
| Flam. Liq. 2 - H225 | F;R11 R43 | Xi;R37/38 | |
| Skin Irrit. 2 - H315 | | | |
| Skin Sens. 1 - H317 | | | |
| STOT SE 3 - H335 | | | |

| METHACRYLIC ACID | | | 5-109 |
|----------------------------|------------------------|--|-------|
| CAS number: 79-41-4 | EC number: 201-204-4 | REACH registration number: 01- 2119463884-26-0000 | |
| Classification | Classific | cation (67/548/EEC or 1999/45/EC) | |
| Acute Tox. 4 - H302 | C;R35 > | Kn;R21/22 | |
| Acute Tox. 4 - H312 | | | |
| Skin Corr. 1A - H314 | | | |
| Eye Dam. 1 - H318 | | | |
| STOT SE 3 - H335 | | | |
| bis[4-(2,3-EPOXYPROPOXY)PH | IENYLJPROPANE | | <19 |
| CAS number: 1675-54-3 | EC number: 216-823-5 | | |
| Classification | Classific | cation (67/548/EEC or 1999/45/EC) | |
| Skin Irrit. 2 - H315 | R43 Xi;I | | |
| Eye Irrit. 2 - H319 | | | |
| Skin Sens. 1 - H317 | | | |
| HYDROQUINONE | | | <19 |
| CAS number: 123-31-9 | EC number: 204-617-8 | | |
| M factor (Acute) = 10 | M factor (Chronic) = 1 | | |
| Classification | Classific | cation (67/548/EEC or 1999/45/EC) | |
| Acute Tox. 4 - H302 | | at. 3;R40 Muta. Cat. 3;R68 Xn;R22 Xi;R41 R43 | 3 |
| Eye Dam. 1 - H318 | N;R50 | | |
| Skin Sens. 1 - H317 | | | |
| Muta. 2 - H341 | | | |
| Carc. 2 - H351 | | | |
| Aquatic Acute 1 - H400 | | | |

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

| General information | Avoid contact with skin and eyes. Do not breathe vapour/spray. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
|---------------------|---|
| Inhalation | Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues. |
| Ingestion | Do not induce vomiting. Give plenty of water to drink. Get medical attention. |
| Skin contact | Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. |
| Eye contact | Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if irritation persists after washing. |

4.2. Most important symptoms and effects, both acute and delayed

| General information | The severity of the symptoms described will vary dependent on the concentration and the length of exposure. | | |
|---|--|--|--|
| 4.3. Indication of any immedia | te medical attention and special treatment needed | | |
| Notes for the doctor | No specific recommendations. If in doubt, get medical attention promptly. | | |
| SECTION 5: Firefighting meas | sures | | |
| 5.1. Extinguishing media | | | |
| Suitable extinguishing media | Extinguish with foam, carbon dioxide or dry powder. | | |
| 5.2. Special hazards arising fr | om the substance or mixture | | |
| Specific hazards | Highly flammable. Avoid breathing fire gases or vapours. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Polymerises easily with evolution of heat. | | |
| 5.3. Advice for firefighters | | | |
| Protective actions during firefighting | Keep up-wind to avoid fumes. Do not use water jet as an extinguisher, as this will spread the fire. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. | | |
| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. | | |
| SECTION 6: Accidental release | e measures | | |
| 6.1. Personal precautions, pro | tective equipment and emergency procedures | | |
| Personal precautions | Highly flammable Warn everybody of potential hazards and evacuate if necessary. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of spray mist and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. | | |
| 6.2. Environmental precaution | <u>s</u> | | |
| Environmental precautions | Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. | | |
| 6.3. Methods and material for | containment and cleaning up | | |
| Methods for cleaning up | Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. | | |
| 6.4. Reference to other section | ns | | |
| Reference to other sections | For personal protection, see Section 8. For waste disposal, see section 13. | | |
| SECTION 7: Handling and storage | | | |
| 7.1. Precautions for safe handling | | | |
| Usage precautions | Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Avoid contact with skin and eyes. Take precautionary measures against static discharges. Storage tanks and other containers must be earthed. No smoking, sparks, flames or other sources of ignition near spillage. Good personal hygiene procedures should be implemented. | | |

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10).

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

METHYL METHACRYLATE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 208 mg/m³ Short-term exposure limit (15-minute): WEL 100 ppm 416 mg/m³

METHACRYLIC ACID

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³ Short-term exposure limit (15-minute): WEL 40 ppm 143 mg/m³

HYDROQUINONE

Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m³ WEL = Workplace Exposure Limit

Ingredient comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment





| Appropriate engineering controls | Provide adequate general and local exhaust ventilation. |
|-------------------------------------|--|
| Eye/face protection | Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166. |
| Hand protection | Wear protective gloves made of the following material: Rubber or plastic. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours. |
| Other skin and body protection | Wear apron or protective clothing in case of contact. |
| Hygiene measures | Provide eyewash station and safety shower. Keep away from food, drink and animal feeding stuffs. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using the product. Change work clothing daily before leaving workplace. |
| Respiratory protection | If ventilation is inadequate, suitable respiratory protection must be worn. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Organic vapour filter. Gas filter, type A2. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. |

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| SECTION 9: Physical and Chemical Properties | | | |
|--|---|--|--|
| 9.1. Information on basic physical and chemical properties | | | |
| Appearance | Paste. | | |
| Colour | White/off-white. | | |
| Odour | Slight pungent. | | |
| рН | pH (diluted solution): 300-3.5 5% | | |
| Initial boiling point and range | 101°C @ | | |
| Flash point | 10°C TCC (Tag closed cup). | | |
| Evaporation rate | 3 (butyl acetate =1) | | |
| Upper/lower flammability or explosive limits | Lower flammable/explosive limit: 2.1 Upper flammable/explosive limit: 12.5 | | |
| Vapour pressure | 28 mmHg @ °C | | |
| Vapour density | >1 | | |
| Relative density | 1.03 @ 20 °C°C | | |
| Viscosity | 40,000-60,000 cP @ 25°C | | |
| 9.2. Other information | | | |
| Other information | Not available. | | |
| SECTION 10: Stability and reactivity | | | |
| 10.1. Reactivity | | | |
| Reactivity | The following materials may react with the product: Strong oxidising agents. Strong reducing agents. | | |
| 10.2. Chemical stability | | | |
| Stability | Stable at normal ambient temperatures and when used as recommended. May polymerise. | | |
| 10.3. Possibility of hazardous reactions | | | |
| Possibility of hazardous reactions | May polymerise. | | |
| 10.4. Conditions to avoid | | | |
| Conditions to avoid | Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time. Avoid exposure to high temperatures or direct sunlight. Heating may generate flammable vapours. Vapours may form explosive mixtures with air. | | |
| 10.5. Incompatible materials | | | |
| Materials to avoid | Avoid contact with the following materials: Oxidising agents. Reducing agents. Alkalis - inorganic. Alkalis - organic. | | |
| 10.6. Hazardous decomposition products | | | |
| Hazardous decomposition products | Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. | | |
| SECTION 11: Toxicological information | | | |
| | | | |

11.1. Information on toxicological effects

Acute toxicity - oral

| ATE oral (m | ıg/kg) | 6,250.0 | | |
|--|--|---|---|--|
| Acute toxicit | | | | |
| ATE dermal | (mg/kg) | 13,750.0 | 0 | |
| Inhalation | | Vapours in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting. Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression. | | |
| Ingestion | | Irritating. Symptoms following overexposure may include the following: Nausea, vomiting. Stomach pain. | | |
| Skin contact | t | cause s | absorbed through the skin. Irritating to skin. Prolonged or repeated exposure may evere irritation. May cause sensitisation by skin contact. May cause sensitisation or reactions in sensitive individuals. | |
| Eye contact | | Irritating to eyes. A single exposure may cause the following adverse effects: Corneal damage. | | |
| Target orga | t organs Prolonged or repeated exposure may cause the following adverse effects: May cause damage to the liver and kidneys. Central nervous system Respiratory system, lungs | | | |
| bis[4-(2,3-EPOXYPROPOXY)PHENYL]PROPANE | | | | |
| | Carcinogenicity | | | |
| | IARC carcinogen | nicity | IARC Group 3 Not classifiable as to its carcinogenicity to humans. | |
| | | | 1,1,2-TRICHLOROETHANE | |
| | Acute toxicity - o | ral | | |
| | ATE oral (mg/kg) |) | 500.0 | |
| | Acute toxicity - d | ermal | | |
| | ATE dermal (mg/ | /kg) | 1,100.0 | |
| | Acute toxicity - in | halation | | |
| | ATE inhalation (g ppm) | jases | 4,500.0 | |
| | ATE inhalation (\ mg/l) | /apours | 11.0 | |
| | ATE inhalation (dusts/mists mg/l |) | 1.5 | |
| | Carcinogenicity | | | |
| | IARC carcinogen | nicity | IARC Group 3 Not classifiable as to its carcinogenicity to humans. | |
| | | | HYDROQUINONE | |
| | Acute toxicity - o | ral | | |
| | ATE oral (mg/kg) |) | 500.0 | |
| | | | | |

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Carcinogenicity

| SECTION 12: Ecological Information | | | |
|--|---|--|--|
| SECTION 12: Ecological Infor | mauon | | |
| Ecotoxicity | Avoid release to the environment. | | |
| 12.1. Toxicity | | | |
| Toxicity | Not considered toxic to fish. | | |
| 12.2. Persistence and degrada | ability | | |
| Persistence and degradability | Methyl methacrylate monomer : Biochemical oxygen demand within 5 days (BOD5) = .14 g/g - 0.9 g/g. | | |
| 12.3. Bioaccumulative potentia | al | | |
| Bioaccumulative potential | Methyl methacrylate monomer: LC50/96h/fathead minnows = 150 ppm, LC50/96h/bluegill sunfish = 232ppm. Methyl methacrylate monomer: LC50/96h/rainbow trout = >79mg/l | | |
| 12.4. Mobility in soil | | | |
| Mobility | Do not discharge into drains or watercourses or onto the ground. | | |
| 12.5. Results of PBT and vPv | 3 assessment | | |
| Results of PBT and vPvB assessment | This product does not contain any substances classified as PBT or vPvB. | | |
| 12.6. Other adverse effects | | | |
| Other adverse effects | Not available. | | |
| SECTION 13: Disposal consid | lerations | | |
| 13.1. Waste treatment method | ls | | |
| General information | Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling | | |
| | waste, the safety precautions applying to handling of the product should be considered. | | |
| Disposal methods | waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. | | |
| Disposal methods Waste class | Dispose of waste to licensed waste disposal site in accordance with the requirements of the | | |
| | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 | | |
| Waste class | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 | | |
| Waste class SECTION 14: Transport inform | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 | | |
| Waste class SECTION 14: Transport inform General | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> UN No. (ADR/RID) | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> UN No. (ADR/RID) UN No. (IMDG) | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. 1133 1133 | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> UN No. (ADR/RID) UN No. (IMDG) UN No. (ICAO) | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. 1133 1133 | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> UN No. (ADR/RID) UN No. (IMDG) UN No. (ICAO) <u>14.2. UN proper shipping name</u> | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. 1133 1133 1133 e ADHESIVES | | |
| Waste class SECTION 14: Transport inform General <u>14.1. UN number</u> UN No. (ADR/RID) UN No. (IMDG) UN No. (ICAO) <u>14.2. UN proper shipping name</u> (ADR/RID) | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. 1133 1133 1133 1133 1133 B ADHESIVES ADHESIVES | | |
| Waste class SECTION 14: Transport inform General 14.1. UN number UN No. (ADR/RID) UN No. (IMDG) UN No. (ICAO) 14.2. UN proper shipping name (ADR/RID) Proper shipping name (IMDG) | Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 08 04 09 nation No other information known. 1133 1133 1133 1133 1133 B ADHESIVES ADHESIVES | | |

| ADR/RID class | 3 |
|---------------------|---|
| ADR/RID label | 3 |
| IMDG class | 3 |
| ICAO class/division | 3 |

Transport labels



14.4. Packing group

| ADR/RID packing group | II |
|-----------------------|----|
| IMDG packing group | II |
| ICAO packing group | II |

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant No.

14.6. Special precautions for user

| EmS | F-E, S-D | |
|--|----------|--|
| Emergency Action Code | •3YE | |
| Hazard Identification Number (ADR/RID) | 33 | |
| Tunnel restriction code | (D/E) | |
| 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code | | |
| | | |

Transport in bulk according to No information required. Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

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

EU legislation

No chemical safety assessment has been carried out.

SECTION 16: Other information

| Revision date | 03/05/2017 |
|-----------------|------------|
| Revision | 30 |
| Supersedes date | 22/04/2016 |

| Risk phrases in full | R11 Highly flammable. R21/22 Harmful in contact with skin and if swallowed. R35 Causes severe burns. R37 Irritating to respiratory system. R37/38 Irritating to respiratory system and skin. R38 Irritating to skin. R43 May cause sensitisation by skin contact. |
|---------------------------|---|
| Hazard statements in full | H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. 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. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H400 Very toxic to aquatic life. |

This information relates only to the specific material designated 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 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.