

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product / Substance name: Treadmaster Marine Epoxy Resin Part A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Adhesives, sealants.

1.3. Details of the supplier of the Safety Data Sheet

Company name: Tiflex Limited
Address: Tiflex House
Liskeard, Cornwall
PL14 4NB.
UNITED KINGDOM
Telephone: +44 (0)1579 320808
Fax: +44 (0)1579 320802
E-mail: sward@tiflex.co.uk Steve Ward - Technical Manager

1.4. Emergency telephone number

Emergency tel: +44 (0)1579 320808 Only available during office hours Mon-Thurs 9am - 5 pm, Fri 9am - 2pm

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture:

2.1.1 Classification according to Regulations (EC) No 1272/2008 (CLP)

Physical hazards: Not classified.
Health hazards: Skin Irrit. 2 - H315. Eye Irri. 2 - H319. Skin Sens. 1 - H317
Environmental hazards: Aquatic Chronic 3 - H412
Human Health: May cause sensitisation or allergic reactions in sensitive individuals.
Environmental: The Product contains a substance which is toxic to aquatic organisms.

2.2 Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements: H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+ 352 IF ON SKIN: Wash with plenty of water.
P305+ 351+ 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+ 313 If skin irritation occurs: Get medical advice/ attention
P337+ 313 If eye irritation persists: Get medical advice / attention
P501 Dispose of contents / container to national regulations.

Supplementary precautionary statements:

P261 Avoid breathing vapour / spray.

P264	Wash contaminated skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P321	Specific treatment (See medical advice on this label).
P333+ 313	If skin irritation or rash occurs: Get medical advice / attention.
P362+ 364	Take off contaminated clothing and wash before re-use.

Supplemental Hazard Information:

Contains REACTION PRODUCT; BISPHENOL-A-(EPICHLOROHYDRIN) EPOXY RESIN (AVERAGE NUMBER MOLECULAR WEIGHT \approx 700), FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL)OXIRANE AND PHENOL MW \leq 700, OXIRANRE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS

2.3 Other hazards

PBT/vPvB: This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients

CAS No.	EC No.	Index No.	REACH Registration No.	Identification name	% Weight	Classification according to Regulation (EC) No 1278/2008 (CLP)
25068-38-6	500-033-5		01-2119456619-26-0004	REACTION PRODUCT; BISPHENOL-A- (EPICHLOROHYDRIN) EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT \leq 700)	10 - 30	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411
68609-97-2	271-846-8		01-2119485289-22-0000	OXIRANE, MONO[(C12-14- ALKYLOXY) METHYL] DERIVS	5 - 10	Skin Irrit. 2 - H315 Skin Sens. 1 - H317
9003-36-5			01-2119454392-40	FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL) OXIRANE AND PHENOL MW \leq 700	5 - 10	Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Irrit. 12 - H315 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Information:	Remove affected person from source of contamination. In all cases of doubt, or when symptoms persist, seek medical attention.
Following inhalation:	Remove victim to fresh air immediately, ensuring one's own safety first, keep warm at rest and in a position comfortable for breathing, get medical attention.
Following skin contact:	Remove all contaminated clothing and launder before reuse. Wash the affected area with clean running water for at least 15 minutes. If any soreness or irritation occurs as the result of skin exposure, or if any discomfort or symptoms persist seek medical advice.
Following eye contact:	Rinse immediately with plenty of water. Remove any contact lenses if present and easy to do and open the eye wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any irritation persists after washing. Show this Safety Data Sheet to the medical personnel.
Following ingestion:	DO NOT INDUCE VOMITING. Get medical attention immediately and the label or safety data sheet information should be taken with the patient when seeking medical advice.
Self protection for first aider:	Keep yourself protected, assess your surroundings, be cautious of any fumes or vapours. On approach always put on your gloves.

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.
Inhalation:	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of pressure in the chest.
Skin contact:	Prolonged skin contact may cause redness and irritation.

Eye contact: Irritation of eyes and mucous membranes.

Ingestion: May cause discomfort if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Inhalation: If you feel unwell, seek medical advice (show the label where possible).

Skin contact: Seek medical attention if irritation or symptoms persist.

Eye contact: Seek medical attention.

Ingestion: If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.

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: The product is non-combustible. Irritating gases or vapours not known.

Hazardous combustion products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for Fire-fighters

Protective actions during fire-fighting: Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.

Advice for fire-fighters: Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Ensure adequate ventilation of the area. Avoid contact with skin and eyes. Wear suitable protective equipment (see Section 8 for Personal Protective Equipment).

6.1.2. For emergency responders: Wear suitable protective equipment (see Section 8 for Personal Protective Equipment).

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and materials for containment and cleaning up

6.3.1. For containment: Contain spillage with appropriate bunding use sand earth or other suitable non-combustible material or absorbent. Prevent spillage runoff from entering drains, sewers and water courses.

6.3.2. For cleaning up: Absorb spill with non-combustible, absorbent material. Collect into suitable waste disposal containers and seal securely. Provide adequate ventilation of the area. Avoid spillage runoff entering drains, sewers or water courses.

6.3.3. Other information: Wear protective clothing as described in Section 8 of this safety data sheet.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for more detailed information on health effects and symptoms. For waste disposal, see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective measures: Avoid inhalation of vapours and spray / mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and / or respirator.

Measures to prevent fire: This product is non-combustible

Measures to prevent aerosol and dust generation: Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

Measures to protect the environment: Adopt best Manual handling considerations when handling, carrying and dispensing.

Advice on general occupational hygiene: Observe best practice when handling, wash thoroughly after use. Strictly no eating or drinking when

handling this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:	Store in closed original container at temperatures between 5°C and 25°C.
Packaging materials:	Store in original packaging only.
Requirements for storage rooms and vessels:	All chemical preparations / mixtures should be stored securely where they cannot be interfered with or used by unauthorised persons.
Storage class:	Chemical storage.

7.3. Specific end use (s)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTIVE EQUIPMENT

8.1. Control parameters

Workplace exposure limits:

REACTION PRODUCT; BISPHENOL A (EPICHLORHYDRIN) EPOXY RESIN (AVERAGE NUMBER MOLECULAR WEIGHT <= 700) (CAS: 25068-38-6)

DNEL	Workers	Dermal	Short term systemic effects	8.3 mg/kg bw/day
	Workers	Inhalation	Short term systemic effects	12.3 mg/m3
	Workers	Dermal	Long term systemic effects	8.3 mg/kg bw/day
	Workers	Inhalation	Long term systemic effects	12.3 mg/m3
	General population	Dermal	Short term systemic effects	3.6 mg/kg bw/day
	General population	Inhalation	Short term systemic effects	0.75 mg/m3
	General population	Oral	Short term systemic effects	0.75 mg/kg bw/day
	General population	Dermal	Long term systemic effects	3.6 mg/kg bw/day
	General population	Inhalation	Long term systemic effects	0.75 mg/m3
	General population	Oral	Long term systemic effects	0.75 mg/kg bw/day
PNEC	Fresh water		0.003 mg/l	
	STP		10 mg/l	
	Marine water		0.0003 mg/l	
	Sediment (Freshwater)		0.5 mg/kg	dry weight
	Sediment (Marinewater)		0.5 mg/kg	dry weight
	Sediment		0.05 mg/kg	dry weight
	Intermittent release		0.013 mg/l	

FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL) OXIRANE AND PHENOL MW <= 700 (CAS: 9003-36-5)

DNEL	Workers	Dermal	Short term local effects	83 mg/m3
	Workers	Dermal	Long term systemic effects	104.15 mg/kg bw/day
	Workers	Inhalation	Long term systemic effects	29.39 mg/m3
	General population	Dermal	Long term systemic effects	62.5 mg/kg bw/day
	General population	Inhalation	Long term systemic effects	8.7 mg/m3
	General population	Oral	Long term systemic effects	6.25 mg/kg bw/day
PNEC	Fresh water		0.003 mg/l	
	Marine water		0.003 mg/l	
	STP		10 mg/l	
	Sediment (Freshwater)		0.294 mg/kg	dry weight
	Sediment (Marinewater)		0.0294 mg/kg	dry weight
	Soil		0.237 mg/kg	dry weight
Intermittent release		0.0254 mg/l		

8.2. Exposure controls

Protective equipment:



8.2.1. Appropriate engineering controls: Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

8.2.2. Personal protection equipment:

8.2.2.1 Hygiene measures:

Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after

handling. When using do not eat, drink or smoke.

8.2.2.2.a Eye protection:

Wear chemical splash goggles.

8.2.2.2.b Skin protection:

Hand protection: Chemical resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber.

Other skin protection: Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

8.2.2.2.c Respiratory protection:

If ventilation is inadequate, suitable respiratory protection must be worn. In confined or poorly-ventilated spaces, a supplied-air fed respirator must be worn. Wear a respirator fitted with the following cartridge: Gas filter type AX.

8.2.2.2.d Thermal hazards:

The molten product can cause serious burns.

8.2.3.Environmental exposure controls:

Keep container tightly sealed when not in use.

9.1. Information on basic physical and chemical properties

Appearance:	Coloured liquid.
Odour:	Characteristic
Odour threshold:	Not available.
pH:	Not available.
Melting/freezing point:	Not applicable.
Initial boiling point and boiling range:	Not applicable.
Flash point:	>200°C CC (Closed cup).
Evaporation rate:	Slow.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Not applicable.
Vapour pressure:	Not available.
Vapour density:	Not applicable.
Relative density:	1.63 @ 20°C
Solubility:	Insoluble in water. Hardens in contact with water.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	>600°C
Decomposition temperature:	Not available.
Viscosity:	Kinematic viscosity > 20.5 mm ² /s.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2. Other Information

Other information:	No information required.
Refractive Index:	Not available.
Particle size:	Not available.
Molecular weight:	Not available.
Volatility:	Not available.
Saturation concentration:	Not available.
Critical temperature:	Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity:	Amines.
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10.2. Chemical stability

Chemical stability: Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Hazardous reactions: Not applicable. May polymerise.

10.4. Conditions to avoid

Conditions to avoid: Avoid contact with water. Strong alkalis.

10.5. Incompatible materials

Materials to avoid: Strong acids . Strong alkalis.

10.6. Hazardous decomposition products

Haz. Decomp. Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 31,633.06

Acute toxicity - dermal

ATE dermal (mg/kg) 31,633.06

Skin corrosion / irritation

Animal data Irritating

Serious eye damage / irritation

Serious eye damage / irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Carcinogenicity

Carcinogenicity Not available

Target organ for carcinogenicity

No specific target organs known.

Reproductive toxicity

Reproductive toxicity - development The substance has no evidence of toxicity to reproduction.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation

Irritating to the respiratory system.

Ingestion

May cause stomach pain or vomiting.

Skin contact

Irritating to skin.

Eye contact

Irritation of eyes and mucous membranes.

Acute and chronic health hazards

May cause respiratory system irritation. The product contains an epoxy resin.

Route of entry

Inhalation. Skin and / or eye contact.

Medical symptoms

Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.

Toxicological information on ingredients.

REACTION PRODUCT; BISPHENOL A (EPICHLORHYDRIN) EPOXY RESIN (AVERAGE NUMBER MOLECULAR WEIGHT <= 700) (CAS: 25068-38-6)

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 11,400.0 Species Rat

ATE oral (mg/kg) 11,400.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0 Species Rat

**FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL) OXIRANE AND PHENOL MW <= 700
36-5)**

(CAS: 9003-

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,000.0 Species Rat
ATE oral (mg/kg) 2,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0 Species Rabbit
ATE dermal (mg/kg) 2,000.0

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Dangerous for the environment.

12.1. Toxicity

Acute toxicity - fish LC50 96 hours > 1000 mg/l Freshwater fish
Acute toxicity - aquatic invertebrates: EC50 48 hours > 500 mg/l Daphnia magna
Acute toxicity - aquatic plants: EC50 72 hours ~ 1640 mg/l Scenedesmus subspicatus

Ecological information on ingredients

OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS

Acute toxicity - fish: LC50 96 hours 5000 mg/l Onchorhynchus mykiss (Rainbow trout)
LC50 96 hours 1800 mg/l Lepomis macr > 500 mg/l (Bluegill)
Acute toxicity - aquatic plants: EC50 72 hours 843 mg/l Pseudokirchneriella subcapitata
NOEC 72 hours 500 mg/l Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Persistence and degradability: The product is not readily biodegradable.
Stability (hydrolysis): Reacts with water.
Biological oxygen demand: < 10 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential: The product does not contain any substances expected to be bioaccumulating.
Partition coefficient: Not available

Ecological information on ingredients

OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS

Bioaccumulative potential: BCF: 160, Algae
Partition coefficient: log Pow: 3.77

12.4. Mobility in soil

Mobility: The product is non-volatile.

Ecological information on ingredients

OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS

Henry's law constant: 1.12E-02 atm m³/mol @ °C

12.5. Results of PBT and vPvB assessment

PBT/vPvB identification: This substance is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No other adverse effects noted.

12.7. Additional information

No additional information.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

General information: Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in

accordance with the requirements of the local Waste Disposal Authority.

Waste class: 070208

SECTION 14: TRANSPORTATION INFORMATION

14.1. UN Number

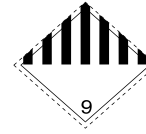
UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction Product; Bisphenol A(Epichlorhydrin) Epoxy Resin (Average number molecular weight <=700))

14.3. Transport hazard class(es)

Transport class: 9



Classification code: M6

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous substance / marine pollutant.



14.6. Special precautions for user

EmS:	F-A, S-F	Hazard Identification Number (ADR/RID):	90
ADR transport category:	3	Tunnel restriction code:	(E)
Emergency action code:	•3Z		

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

SECTION 15: REGULATORY INFORMATION

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

Other Information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010

Classification according to Regulation (EC) No. 1272/2008:

Phrases used in s. 2 and 3:	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H411	Toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects.
		Store between 5°C and 25°C

Information on this Health and Safety Data Sheet is drawn from a variety of sources, including raw material suppliers data, and other published sources.

This 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 his/herself as to the suitability of such information for his/her own particular use. This product falls within the scope of the Control of Substances Hazardous to Health (COSHH) Regulations. Users are reminded that this document does not in itself constitute an assessment of workplace risk as required by those regulations.