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1. Product Identification

Trade Name: **EPIFLEX TRANSITION MORTAR**

Description: Three component flexible epoxide joint filling sealant/mortar.

2. Composition / Information on Ingredients

Ingredient	CAS Number	Conc. (w/w)	Classification	R. Phrases
BASE COMPONENT				
Bisphenol A/F epoxy resin	40216-08-8	15-25%	Xi,N	36/38,43,51/53
Ferric Oxide Pigment	1317-61-9	<5%	None	None
Magnesium Silicate	14807-96-6	<10%	None	None
Magnesium Carbonate	546-93-0	<10%	None	None
Barium Sulphate	7727-43-7	15-25%	None	None
HARDENER COMPONENT				
Mixed Polyamines	N/A	45-60%	C	20/22,34,43
Tetraethylenepentamine	203-986-2	<5%	Xi	36/38,43,52/53
Benzyl Alcohol	100-51-6	20-35%	Xn	20/22
Diethylenetriamine	111-40-0	<10%	C	34,43,21/22
Calcium Nitrate	10124-37-5	<5%	O,Xi	8,36
Ethanol	64-17-5	<5%	F	11
AGGREGATE COMPONENT				
Limestone	1317-65-3	70%	None	None
Quartz Grits	None	30%	None	None
Crystalline Silica	None	Trace	Xn	20,48

3. Hazard Identification

Base: May be irritating to the eyes and skin, and may also cause sensitisation by skin contact. The product is toxic to aquatic organisms and has the potential to cause long term damage to the aquatic environment.

Hardener: Corrosive, causes burns. Harmful by inhalation and if swallowed. Irritating to the eyes and skin, and may also cause sensitisation by skin contact.

Aggregate: Possibility of dust generation when handling. The low level of crystalline silica is unlikely to present a hazard during normal conditions of use.

4. First Aid Measures

Inhalation: In case of drowsiness or sickness remove to fresh air, keep patient warm and at rest. If unconscious, turn to the recovery position. Seek medical assistance.

Skin Contact: Promptly remove contaminated clothing and wash the affected area with plenty of soap and water to ensure all traces of product are removed, then rinse thoroughly. Any contaminated clothing must be thoroughly cleaned before re-using. Seek medical advice if irritation persists.

Eye Contact: Flush with copious amounts of clean water for at least 15 minutes, with the eye lids held open. Seek medical attention.

Ingestion: Wash out mouth with water. Keep patient at rest and obtain medical attention. DO NOT INDUCE VOMITING.

5. **Fire Fighting Measures**

Suitable Extinguisher Media: Water spray, alcohol-resistant foam, dry powder, carbon dioxide or sand.

Unsuitable Extinguishing Media: Water jet.

Exposure Hazards: May give off toxic fumes if heated or involved in a fire, including CO.

Special Protective Equipment: Full face, positive pressure, self-contained breathing apparatus and full protective clothing.

6. **Accidental Release Measures**

Personal Precautions: Wear protective equipment as specified in Section 8. Do not eat, drink or smoke. Avoid contact with skin and eyes. Eliminate all ignition sources.

Environmental Precautions: Eliminate all ignition sources. Keep people and animals away. Prevent entry into drains, sewers and watercourses. If spillage enters drains leading to sewerage works inform the local water company. If spillage enters rivers or watercourses inform the Environment Agency.

Spillages: Cordon off area. Absorb/contain spillage using inert absorbent granules, sand or earth. Transfer collected material to heavy-duty plastic/steel drums and keep in a well ventilated place for subsequent safe disposal. See Section 13.

7. **Handling and Storage**

Handling: No specific precautions required when handling unopened containers; follow any relevant manual handling guidance. Refer to Sections 6 and 8 if exposure to product is possible. Wash thoroughly with soap and water before eating, drinking or smoking, and after work

Storage: Store in original containers in a well ventilated area away from heat, ignition sources or open flame. Do not store near acids.

8. **Exposure Controls / Personal Protection**

Occupational Exposure Standards: Benzyl Alcohol - TLV 5ppm (recommended).
Diethylenetriamine - 8 Hour TWA 1ppm OES (Skin).
Ethanol - 8 Hour TWA 1000ppm OES.
While the hardener component contains the above materials, which have occupational exposure standards assigned to them, it is very unlikely that

these limits would be exceeded under normal conditions of use.

General Dusts/Calcium Carbonate - 8 hour TWA 10mg/m^3 (total inhalable), 4mg/m^3 (respirable) OES.
Talc - 8 Hour TWA 1mg/m^3 (respirable) OES.
Crystalline Silica - 8 hour TWA 0.3mg/m^3 (respirable) MEL.
This MEL must not be exceeded at any time during the exposure period.
While the base component contains Talc and general dusts, which have Occupational Exposure Standards assigned to them, these materials are not present in powder form and therefore do not present an inhalation hazard.

Engineering Control Measures: Refer to any applicable COSHH assessments. Engineering controls should be used where practicable in preference to personal protection and may include physical containment and good ventilation.

Respiratory protection: An approved respirator and filter medium for dusts should be used if engineering controls are unlikely to control exposure below the relevant exposure standards when handling the aggregate component. In the unlikely event that the quoted exposure limits for benzyl alcohol, diethylenetriamine or ethanol are exceeded, an approved respirator fitted with an appropriate gas cartridge (organic substance) should be used.
All items must conform to EN149 and should be suitable for the levels of contamination present in the workplace.

Hand Protection: Wear Neoprene, Nitrile, PVC or Natural Rubber gloves or gauntlets. These must be manufactured to EN374. The material breakthrough time should be stated by the glove manufacturer, and must be observed at all times.

Eye Protection: If contact is likely chemical resistant goggles conforming to BS 2092 should be worn.

Body Protection: Wear suitable impervious, chemical resistant overalls.

Foot Protection: Wear chemical resistant safety footwear.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. **Physical and Chemical Properties**

Appearance: Base: Black liquid **Boiling Point:** >200 ^{0}C
Hardener: Clear liquid.
Aggregate: Off-white aggregate

Odour:	Base: Mild Hardener: Amine type Aggregate: None	**Vapour Pressure @ 20°C:**		N/D
pH: (Of Hardener)	11 (@500g/l)	**Evaporation Rate (Butyl Acetate = 1):**		N/A
Flash Point:	>100°C	**Flammable Limits in Air:**	**Upper:** **Lower:**	N/D N/D
Solubility:	Insoluble in water	**Autoignition Temperature:**	(Hardener)	255°C
Flammability:	Not Flammable			
Specific Gravity:	2.1 (Mixed)			

10. **Stability and Reactivity**

Stability:		Stable under normal conditions (see Section 7).
Materials to Avoid:	Base: Hardener:	Amines and catalysts Mineral and organic acids, oxidising agents, reactive metals and sodium or calcium hypochlorite. Slowly corrodes copper, aluminium, zinc and galvanised surfaces. Reacts violently with peroxides possibly creating an explosion. Reaction with acids is accompanied by large heat release and may be sufficient to cause vigorous boiling, creating a hazard due to splashing or splattering of hot material.
Hazardous Decomposition Products:		Ammonia and aldehydes. Oxides of carbon and nitrogen. Nitrogen oxide can react with water vapours to form corrosive nitric acid. Other oxides of nitrogen emitted on decomposition are highly toxic.

11. **Toxicological Information**

There is no data available on the product itself.
The following data applies to the Epoxy component of the Base material.

Acute Toxicity:

Eye Contact:	Irritant.
Skin Contact:	Irritant for skin and mucous membranes. May cause sensitisation.
Ingestion:	May result in irritation to the gastro intestinal tract.

The following data applies to the Amine component of the Hardener material.

Acute Toxicity:

Eye Contact:	Strong caustic effect.
Skin Contact:	Caustic effect on skin and mucous membranes. May cause sensitisation.
Ingestion:	Swallowing will lead to a strong caustic effect on

the mouth and throat, and to the danger of perforation of the esophagus and stomach.

No specific data is available on the materials within the aggregate component.

12. **Ecological Information**

There is no data available on the product itself.
The following data applies to un-mixed material only, as once the base and hardener are combined the harmful constituents will react to form an inert product.
Hazardous for water. Do not allow the product to reach ground water, water bodies or sewage systems. Must not reach sewage water or drainage ditch undiluted or unneutralised. Danger to drinking water if even small quantities leak into soil.

13. **Disposal Considerations**

Un-reacted materials: Dispose of used containers and un-reacted product as hazardous waste, in accordance with all applicable local and national regulations, and in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

14. **Transport Information**

Base:

UN Number:	3082	Packaging Group:	III
ROAD		**AIR**	
ADR Class:	Limited quantity	Air Transport Number:	9
ADR Hazard Number:	in compliance with chapter 3.4 LQ7 less than 5 litres per inner package	Packaging Instruction:	914
SEA			
IMDG Class:	9		
IMDG Page Number:	9028		
Marine Pollutant:	P		

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S. (contains epoxy resin).

Hardener:

UN Number:	2735	Packaging Group:	III
ROAD		**AIR**	
ADR Class:	Limited quantity	Air Transport Number:	8
ADR Hazard No:	in compliance with chapter 3.4 LQ19 less than 3 litre per inner package	Packaging Instruction:	820
SEA			
IMDG Class:	8		
IMDG Page Number:	8109-2		
Marine Pollutant:	P		

Proper Shipping Name: Amines, liquid, corrosive, N.O.S. (Contains mixed polyamines).

15. **Regulatory Information**

EU Classification and Labelling Particulars:

Base:

Designated Name: EPIFLEX TRANSITION MORTAR - BASE

Classification: Irritant & Dangerous for the Environment - Contains epoxy constituents (see information supplied by the manufacturer).

Indication(s) of Danger: Xi & N

Contains: Epoxy constituents- see information supplied by the manufacturer.

Risk and Safety Phrases:

R36/38:	Irritating to eyes and skin.
R43:	May cause sensitisation by skin contact.
R51/53:	Toxic to aquatic organisms, may cause long-term adverse Effects in the aquatic environment.
S25:	Avoid contact with eyes.
S28:	After contact with skin, wash immediately with plenty of soap and water.
S37/39:	Wear suitable gloves and eye/face protection.
S61:	Avoid release to the environment. Refer to special instructions/ Safety data sheet.

Hardener:

Designated Name: EPIFLEX TRANSITION MORTAR - HARDENER

Classification: Corrosive

Indication(s) of Danger: C

Contains: Mixed polyamines & Benzyl Alcohol

Risk and Safety Phrases:

R20/22:	Harmful by inhalation and if swallowed.
R34:	Causes burns.
R36/38:	Irritating to eyes and skin.
R43:	May cause sensitisation by skin contact.
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28:	After contact with skin, wash immediately with plenty of water and soap.
S36/37/39:	Wear suitable protective clothing, gloves and eye/face protection.
S45:	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Aggregate:

Designated Name: EPIFLEX TRANSITION MORTAR - AGGREGATE

Classification: Not classified as hazardous

Indication(s) of Danger: N/A

UK Guidance Publications: EH40; Occupational Exposure Limits, HSE. Revised annually.
EH26; Occupational Skin Diseases - Health and Safety Precautions, HSE.
EH44; Dust in the Workplace: General Principles of Protection, HSE.
MDHS 14; Methods for the Determination of Respirable and Total Dusts, HSE.

UK Legislation: Health and Safety at Work, etc Act, 1974, and relevant Statutory Provisions.
Control of Substances Hazardous to Health Regulations, 1999.
The Manual Handling Operations Regulations, 1992.
The Personal Protective Equipment at Work Regulations, 1992.
Chemicals (Hazard Information and Packaging for Supply) Regulations, 2002 - CHIP 3.

16. **Other Information**

Full Text of R-Phrases Referred to above:

R8:	Contact with combustible material may cause fire.
R11:	Highly flammable.
R20:	Harmful by inhalation.
R21:	Harmful in contact with skin.
R22:	Harmful if swallowed.
R34:	Causes burns.
R36/38:	Irritating to eyes and skin.
R43:	May cause sensitisation by skin contact.
R48:	Danger of serious damage to health by prolonged exposure.
R51:	Toxic to aquatic organisms.
R52:	Harmful to aquatic organisms.
R53:	May cause long-term adverse effects in the aquatic environment.

Training Advice: Do not use unless trained to do so. Refer to the Technical Data Sheet for the product.

Recommended Uses: For professional use only. This product is designed for use as a cold curing epoxy resin based bridge joint transition system.

Further Information: This Safety Data Sheet was compiled in accordance with EU Directives 67/548/EEC and 1999/45/EC. Reference was also made to the above legislation and guidance publications.

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Prepared By: F. Stratton

Disclaimer: The information in this document is offered for general health and safety guidance only and is not intended to be a definitive source of advice, nor does

it constitute a risk assessment, for which the user is responsible. All information provided in this document is believed to be accurate to the best of our knowledge. Users of the products referred to should observe the recommendations, conditions and instructions relating to any relevant product label, usage information, consent or approval in force at the time. Further and more specific information may be obtained from the supplier on request.