Safety Data Sheet

Product: **BELZONA® 4411 (Granogrip)**
Date: **MARCH 1999**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION	Belzona Polymerics Ltd. Claro Road, Harrogate, HG1 4AY. Tel: +44 (0) 1423 567641 Emergency Tel: +44 (0) 1423 503218	Product Type: Two-pack material for providing positive grip surfaces
	BASE	**SOLIDIFIER**
2. COMPOSITION/INFORMATION ON INGREDIENTS	Bisphenol A-epichlorohydrin (Reaction product) 60-100%	Isophoronediamine 10-30% Benzyl alcohol 10-30% Trimethylhexamethylenediamine 10-30%
3. HAZARDS IDENTIFICATION	Irritant. Repeated or prolonged exposure may result in dermatitis and skin sensitization.	Contact causes burns and possible sensitization. Severe cases may result in permanent damage.
4. FIRST AID MEASURES		
Inhalation	Remove to fresh air	Remove to fresh air
Skin	Remove excess with clean cloth and wash skin thoroughly with soap and water. If irritation or inflammation persists seek medical attention.	Remove excess with clean cloth and wash skin thoroughly with soap and water. In the event of any irritation or inflammation seek immediate medical attention.
Eyes	Rinse immediately with copious amounts of water for at least 15 minutes. If irritation persists seek medical attention.	Rinse immediately with copious amounts of water for at least 15 minutes. Seek medical attention promptly.
Ingestion	Do not induce vomiting. Immediately rinse mouth with water. Drink plenty of water. Seek medical attention promptly.	Do not induce vomiting. Immediately rinse mouth with water. Drink 1/3 pint water every 10 minutes for 30 minutes. Seek medical attention promptly.
5. FIRE-FIGHTING MEASURES		
Extinguishing Media	Dry powder, foam, carbon dioxide, water fog.	Dry powder, foam, carbon dioxide, water fog.
Unsuitable	Water jet	Water jet
Special Procedures	Fire fighters must wear self contained breathing apparatus due to the toxic nature of evolved gases.	Fire fighters must wear self contained breathing apparatus due to the toxic nature of evolved gases.
6. ACCIDENTAL RELEASE MEASURES		
Personal Precautions	Wear suitable protective gloves and clothing.	Wear suitable protective gloves and clothing.
Environmental Precautions	Do not allow to contaminate water, effluent or soil. Observe Local Bye Laws.	Do not allow to contaminate water, effluent or soil. Observe Local Bye Laws.
Cleansing Methods	Absorb with dry inert material such as sand. Place into suitable labelled containers for disposal. Flush contaminated area with detergent and water.	Absorb with dry inert material such as sand. Place into suitable labelled containers for disposal. Flush contaminated area with detergent and water.
7. HANDLING AND STORAGE	Avoid contact with skin and eyes. When using do not eat, drink or smoke. Store in tightly lidded containers in dry conditions between 5°C and 30°C.	Avoid breathing vapour. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Store in tightly lidded containers in dry conditions between 5°C and 30°C.
8. EXPOSURE CONTROLS AND PERSONAL PROTECTION		
Respiratory	In confined areas or where good natural/mechanical ventilation is not available respiratory protection should be used.	In confined areas or where good natural/mechanical ventilation is not available respiratory protection should be used.
Hands	Impermeable nitrile or neoprene gloves.	Impermeable nitrile or neoprene gloves.
Eyes	Faceshield/Goggles	Faceshield/Goggles
Other	Suitable protective clothing	Suitable protective clothing

	BASE	SOLIDIFIER
9. PHYSICAL AND CHEMICAL PROPERTIES		
Boiling point	Decomposes	> 90°C
Flash Point (Closed Cup)	> 95°C	> 95°C
Flammability	Non flammable, but combustible.	Non-flammable, but combustible.
Autoflammability	No information available	No information available
Explosive Properties	Not applicable	Not applicable
Oxidising Properties	Not applicable	Not applicable
Vapour Pressure	Not applicable	30.0 Pa at 20°C
Relative Density	1.19	0.98
Solubility in Water	Insoluble	Insoluble
Other Data	Exothermic reactions occur when components are mixed. Avoid storage of mixed material in sealed containers.	Exothermic reactions occur when components are mixed. Avoid storage of mixed material in sealed containers.
10. STABILITY AND REACTIVITY	Stable	Stable
Conditions to Avoid	Not applicable	Not applicable
Materials to Avoid	Strong oxidising agents, acids, bases and amines.	Strong oxidising agents, acids, epoxy resins and isocyanates.
Hazardous Decomposition Products	Gaseous combinations of carbon, hydrogen and oxygen.	Gaseous combinations of carbon, hydrogen, oxygen and nitrogen.
11. TOXICOLOGICAL INFORMATION	Base component: Oral LD_{50} > 5000 mg/kg^{-1} Dermal LD_{50} > 2100 mg kg^{-1}	Trimethylhexamethylenediamine: Oral LD_{50} (rat) 910 mg kg^{-1} p-ter-Butyl Phenol: Oral LD_{50} (rat) 2951 mg kg^{-1}
12. ECOLOGICAL INFORMATION	Bisphenol A-epichlorohydrin (Reaction Product) LC_{50} (Fathead minnow) : 3.1 mgL^{-1} Based on absence of biodegradability and on moderate toxicity to fish, resin could be potential aquatic pollutant.	No information available
13. DISPOSAL	Excess product should be mixed and allowed to solidify before disposal. Disposal must be carried out in accordance with Local and National Regulations.	Excess product should be mixed and allowed to solidify before disposal. Disposal must be carried out in accordance with Local and National Regulations.
14. TRANSPORT INFORMATION		
Hazard Warning	Not applicable	Corrosive
UN No.	Not applicable	1760
IMO/IMDG	Not applicable	Class 8/8147
ICAO/IATA	Not applicable	Class 8 1760 III
RID/ADR	Not applicable	Class 8 No 66° (c)
15. REGULATORY INFORMATION		
Hazard	Irritant	Corrosive
Risk Phrases	Irritating to eyes and skin. May cause sensitization by skin contact.	Harmful by inhalation and if swallowed. Causes burns. May cause sensitization by skin contact.
Safety Phrases	Contains epoxy constituents. See information supplied by manufacturer. Avoid contact with skin and eyes. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.	In case of contact with eyes rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid contact with skin and eyes.
16. OTHER INFORMATION	Adequate ventilation is that which ensures that the oxygen content of the air being breathed is greater than 18% and that any airborne contaminants with occupational exposure limits do not exceed quoted MEL or OES values.	Adequate ventilation is that which ensures that the oxygen content of the air being breathed is greater than 18% and that any airborne contaminants with occupational exposure limits do not exceed quoted MEL or OES values.

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