WHMIS MATERIAL SAFETY DATA SHEET

SECTION 1 - Product Identification and Use			Date : **4 September, 2000**
Product identifier : **BELZONA® 1421 BASE**			PIN/UN No : **Not applicable**
Product use : **Repair of Machinery and Equipment**			WHMIS classification : **D2B**
Manufacturer's name & address : **BELZONA POLYMERICS Ltd.,** Claro Road, Harrogate, Yorkshire, HG1 4AY, United Kingdom. Emergency telephone number : U.K. -44-1423-503218	Supplier's name & address : **BELZONA Inc.,** 2000 N.W. 88 Court, America's Gateway Park, Miami, Florida 33172, United States.	Supplier's emergency telephone numbers : (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in Canada 202 483 7616 Information telephone number : 305 594 4994 - Working hours only	

SECTION 2 - Hazardous Ingredients

Hazardous Ingredients	Approximate Concentration	CAS Numbers	Exposure Limits	LD_{50}/LC_{50} Species and Route
Diglycidyl ether of Bisphenol A epoxy resin	**30-60%**	**25068-38-6**	**Not available**	**Oral LD_{50}>5g/kg rat**
Diglycidyl ether of Bisphenol F epoxy resin	**30-60%**	**9003-36-5**	**Not available**	**Oral LD_{50}>5g/kg rat**
Cyclohexanedimethanol diglycidylether	**15-40%**	**14228-73-0**	**Not available**	**Not available**

SECTION 3 - Physical Data

Physical state : **Paste**	Appearance/Odour : **Blue or Green/epoxy**	Odour threshold(ppm) : **Not applicable**
Vapour pressure (mm Hg) : **Not available**	Vapour density (Air = 1) : **>1**	Boiling point (°C) : **Decomposes**
pH : **Not applicable**	Specific gravity : **1.10**	Coefficient water/oil : **Not applicable**
Freezing point (°C) : **Not available**	Solubility in water (20°C) : **Negligible**	Evaporation rate (relative to n-Butyl Acetate) : **Not applicable**

SECTION 4 - Fire and Explosion Data

Flammability : If yes, under which conditions :	**Not flammable but combustible**
Means of extinction :	**Water fog, foam, carbon dioxide, dry chemical.**
Special procedures :	**Wear protective clothing and use self-contained breathing apparatus. Full bunker gear should be worn in extreme cases. Use sand to contain burning material.**

Flash point and method : **> 93°C Closed Cup**	Explosion limits (% by volume) : Lower : **Not available** Upper : **Not available**	Autoignition temp (°C) : **Not available**

Hazardous combustion products :
Gaseous combinations of carbon, hydrogen and oxygen

Explosion data - Sensitivity to impact : **Not applicable**	Explosion data - Sensitivity to static discharge : **Not available**

SECTION 5 - Reactivity Data

Chemical stability : If no, under which conditions :	**Yes**
Incompatibility to other substances : If yes, which ones :	**Yes** **Strong oxidizing agents, acids, bases, amines**
Reactivity and under what conditions :	**Not applicable**
Hazardous decomposition products :	**See hazardous combustion products above**

SECTION 6 - Toxicological Properties of Product		
Route of entry : Skin contact : √ Skin absorption : Eye contact : √ Inhalation acute : Inhalation chronic : Ingestion :		
Effects of acute exposure to product : **Irritating to eyes and skin.**		
Effects of chronic exposure to product : **May cause sensitization by skin contact.**		
LD_{50} of product (species and route) : **Not available**	Irritancy of product : **Moderate to extreme on skin/eyes**	Exposure limits of product : **Not available**
LC_{50} of product (species and route) : **Not available**	Sensitization to product : **Skin, on repeated contact**	Synergistic materials : **Not available**
Carcinogenicity : **N.ap** Reproductive effects : **N.ap** Teratogenicity : **N.ap** Mutagenicity : **N.ap**		

SECTION 7 - Preventative Measures		
Personal protective equipment :	Gloves : **Use neoprene or nitrile**	Eye : **Goggles/faceshield**
Footwear : **Industrial boots**	Respiratory (protection required if exposure > TLV) :	Clothing : **Overalls**
Other :		
Engineering controls :	**Provide adequate cross air circulation.**	
Leak and spill procedures :	**Contain with an inert material (e.g. earth or sand). Sweep up and place into suitable covered, labelled containers. Flush area with detergent and water.**	
Waste disposal :	**In accordance with Federal, Provincial and Local Regulations.**	
Handling procedures :	**Avoid contact with skin and eyes.**	
Storage requirements :	**Keep in a cool, well ventilated place, in the original containers.**	

SECTION 8 - First Aid Measures	
Skin :	**After contact with skin, wash immediately with plenty of soap and water.**
Eye :	**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice if any irritation persists.**
Inhalation :	**If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical attention immediately if recovery is delayed.**
Ingestion :	**Do not induce vomiting. Immediately rinse the mouth with water. Drink plenty of water (1 pint/600 mls). Seek medical attention promptly.**
General advice :	**When using do not eat, drink or smoke. Take off immediately all contaminated clothing and launder before reuse. Wash hands thoroughly after handling this product.**

SECTION 9 - Preparation Date of MSDS		
Additional information : **Replaces previous issue dated 12 September 1997**		
Prepared by : **N.A.Robinson**	Phone number : **U.K. -44-1423-567641**	Date : **4 September, 2000**

WHMIS MATERIAL SAFETY DATA SHEET

SECTION 1 - Product Identification and Use			Date : **4 September, 2000**
Product identifier : **BELZONA® 1421 SOLIDIFIER**			PIN/UN No : **1760**
Product use : **Repair and Reclamation**			WHMIS classification : **D2B,E**
Manufacturer's name & address : **BELZONA POLYMERICS Ltd.,** Claro Road, Harrogate, Yorkshire, HG1 4AY, United Kingdom. Emergency telephone number : U.K. -44-1423-503218	Supplier's name & address : **BELZONA Inc.,** 2000 N.W. 88 Court, America's Gateway Park, Miami, Florida 33172, United States.		Supplier's emergency telephone numbers : (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in Canada 202 483 7616 Information telephone number : 305 594 4994 - Working hours only

SECTION 2 - Hazardous Ingredients

Hazardous Ingredients	Approximate Concentration	CAS Numbers	Exposure Limits	LD_{50}/LC_{50} Species and Route
Trimethylhexamethylenediamine	**10-30%**	**25620-58-0**	**Not available**	**Oral LD_{50} = 910 mg/kg (rat)**
4-tert-Butylphenol	**30-60%**	**98-54-4**	**Not available**	**Oral LD_{50} = 3250 Ul/kg (rat)**
m-Xylenediamine	**10-30%**	**1477-55-0**	**ACGIH TLV = 0.1 mg/m³ (Ceiling) (sk)**	**Oral LD_{50} = 930 mg/kg (rat)**
Paraisononylphenol	**5-10%**	**25154-52-3**	**Not available**	**Oral LD_{50} = 1620 mg/kg (rat)**

SECTION 3 - Physical Data

Physical state : **Liquid**	Appearance/Odour : **Pale amber/amine**	Odour threshold(ppm) : **Not available**
Vapour pressure (mm Hg) : **Not available**	Vapour density (Air = 1) : **Not available**	Boiling point (°C) : **>230**
pH : **Not applicable**	Specific gravity : **1.0**	Coefficient water/oil : **Not available**
Freezing point (°C) : **Not applicable**	Solubility in water (20°C) : **<0.1%**	Evaporation rate (relative to n-Butyl Acetate) : **Not applicable**

SECTION 4 - Fire and Explosion Data

Flammability : If yes, under which conditions :	**Not flammable, but combustible**
Means of extinction :	**Water fog, foam, carbon dioxide, dry chemical.**
Special procedures :	**Wear protective clothing and use self-contained breathing apparatus. Full bunker gear should be worn in extreme cases. Use sand to contain burning material.**

Flash point and method : **>93°C Closed Cup**	Explosion limits (% by volume) : Lower : **Not available** Upper : **Not available**	Autoignition temp (°C) : **Not available**

Hazardous combustion products :
Gaseous combinations of carbon, hydrogen, nitrogen and oxygen

Explosion data - Sensitivity to impact : **Not applicable**	Explosion data - Sensitivity to static discharge : **Not available**

SECTION 5 - Reactivity Data

Chemical stability : If no, under which conditions :	**Yes**
Incompatibility to other substances : If yes, which ones :	**Yes** **Strong oxidizing agents, strong acids, epoxy resins, isocyanates**
Reactivity and under what conditions :	**Not applicable**
Hazardous decomposition products :	**See hazardous combustion products above**

Product identifier : **BELZONA® 1421 SOLIDIFIER**

SECTION 6 - Toxicological Properties of Product		
Route of entry : Skin contact : √ Skin absorption : √ Eye contact : √ Inhalation acute : √ Inhalation chronic : Ingestion : √		
Effects of acute exposure to product : **Causes burns. Harmful by inhalation and if swallowed.**		
Effects of chronic exposure to product :		
LD_{50} of product (species and route) : **Not available**	Irritancy of product : **Extreme on skin/eyes. Irritating to respiratory system.**	Exposure limits of product : **Not available**
LC_{50} of product (species and route) : **Not available**	Sensitization to product : **Skin, on repeated contact**	Synergistic materials : **Not available**
Carcinogenicity : **N.av*** Reproductive effects : **N.av*** Teratogenicity : **N.av*** Mutagenicity : **N.av*** *** Not available for the mixture, however available information on the individual components does not indicate any chronic exposure hazard.**		

SECTION 7 - Preventative Measures		
Personal protective equipment :	Gloves : **Use neoprene or nitrile**	Eye : **Goggles/faceshield**
Footwear : **Industrial boots**	Respiratory (protection required if exposure > TLV) : **NIOSH organic vapour**	Clothing : **Overalls**
Other :		

Engineering controls :	**Provide adequate cross air circulation.**
Leak and spill procedures :	**Contain with an inert material (e.g. earth or sand). Sweep up and place into suitable covered, labelled containers. Flush area with detergent and water.**
Waste disposal :	**In accordance with Federal, Provincial and Local Regulations.**
Handling procedures :	**Avoid contact with skin and eyes. Do not breathe vapours.**
Storage requirements :	**Keep in a cool, well ventilated place, in the original containers.**

SECTION 8 - First Aid Measures	
Skin :	**After contact with skin, wash immediately with plenty of soap and water.**
Eye :	**In case of contact with eyes, rinse immediately with plenty of water and seek medical advice if any irritation persists.**
Inhalation :	**If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical attention immediately if recovery is delayed.**
Ingestion :	**Do not induce vomiting. Immediately rinse the mouth with water. Drink one third of a pint/200 mls. of water every ten minutes for 30 minutes. Seek medical attention promptly.**
General advice :	**When using do not eat, drink or smoke. Take off immediately all contaminated clothing and launder before reuse. Wash hands thoroughly after handling this product.**

SECTION 9 - Preparation Date of MSDS		
Additional information : **Replaces previous issue dated 12 September 1997**		
Prepared by : **N.A.Robinson**	Phone number : **U.K. -44-1423-567641**	Date : **4 September, 2000**