

<b>MATERIAL SAFETY DATA SHEET</b> In compliance with OSHA 29 CFR 1910.1200 N.ap means Not Applicable NIA means No Information Available		
PREPARED BY : N.A.ROBINSON	DATE PREPARED : 14 JAN 2003	PAGE 1 OF 4
BELZONA INC., 2000 N.W. 88 COURT, MIAMI, FL 33172	<b>EMERGENCY PHONE NUMBERS</b> (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States <b>INFORMATION PHONE NUMBER</b> 305 594 4994 - Working hours only	

**SECTION I - PRODUCT IDENTIFICATION**

PRODUCT NUMBER : 1104/0180  
 PRODUCT NAME : Belzona® 1111 (Super Metal) Solidifier  
 PRODUCT CLASS : Modified polyamine

**SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA**

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		LC <sub>50</sub> Inhal mg/m <sup>3</sup>
			OSHA PEL mg/m <sup>3</sup>	ACGIH (TWA) ppm	TLV mg/m <sup>3</sup>	LD <sub>50</sub> Oral mg/Kg	Dermal mg/Kg	
Diethylenetriamine	2.5-10	111-40-0	NIA	NIA	4 (sk)	1080	1090	NIA
Phenol	1.8	108-95-2	19	5	10 (sk)	414	669	316
Tris-dimethylamino-methyl Phenol	1-5	90-72-2	NIA	NIA	NIA	1200	1280	NIA
Amorphous silica	1-5	7631-86-9	N.ap	N.ap	N.ap	NIA	NIA	NIA

**CARCINOGENICITY**

No data is available for the mixture, however, none of the ingredients are listed as carcinogens by OSHA, NTP, ACGIH or IARC.

**SECTION III - PHYSICAL DATA**

APPEARANCE AND ODOR : Light gray paste with ammonical odor.  
 BOILING POINT : >175°C  
 VAPOR PRESSURE : NIA  
 EVAPORATION RATE : NIA  
 SOLUBILITY IN WATER : Insoluble

SPECIFIC GRAVITY : 1.66  
 VAPOR DENSITY : NIA  
 % VOLATILE BY VOLUME : 0

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT : >95°C  
 TEST METHOD : Closed Cup

EXPLOSION LIMITS LOWER : NIA  
 UPPER : NIA

OSHA FLAMMABILITY CLASS : Class IIIB liquid.  
 FLAMMABILITY INDEX (NFPA) : 1 - Must be preheated before ignition can occur.  
 INSTABILITY INDEX (NFPA) : 0 - Normally stable, even under fire conditions.  
 HEALTH HAZARD (NFPA) : 3 - Can cause serious or permanent injury.

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PAGE 2 OF 4  
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EXTINGUISHING MEDIA : Water fog (not a direct stream of water), foam, carbon dioxide, dry chemical.

#### SPECIAL FIRE FIGHTING 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.

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

Decomposition and combustion products may be hazardous.

### SECTION V – HEALTH HAZARDS

ROUTE(S) OF ENTRY : Skin contact, skin absorption, eye contact, inhalation.  
PRIME HAZARD(S) : Toxic. Corrosive.

#### EFFECTS OF EXPOSURE

Acute : There is no data on the product itself. Adsorption of phenolic solutions through the skin may be very rapid and can cause death. Lesser exposures can cause damage to the kidneys, liver, pancreas, spleen and edema of the lungs. Contact with skin or any living tissue may cause burns, in severe cases complete tissue destruction may occur. Contact with eyes may cause severe irritation with corneal injury, which may result in permanent impairment of vision. Exposure to vapors may result in irritation of the mucous membrane and the respiratory system, in severe cases burns may occur.

Chronic : There is no data on the product itself. Chronic exposures of phenolic solutions can cause death from liver and kidney damage. Prolonged or repeated contact with the skin or mucous membrane may result in irritant symptoms such as redness, blistering or dermatitis. Onset of symptoms may be delayed. Causes of allergic skin reaction have been observed.

#### EMERGENCY AND FIRST AID PROCEDURES

Inhalation : If symptoms are experienced, remove source of contamination and/or move victim to fresh air. If recovery is delayed or there are signs of distress obtain medical attention immediately.

Eye contact : Flush eyes with water for 15 minutes. Immediate first aid is necessary to prevent eye damage. Seek medical advice if any irritation persists.

Skin contact : Immediately remove excess with a clean cloth and wash skin thoroughly with soap and water. If irritation or inflammation persists, seek medical advice.

### SECTION VI – REACTIVITY DATA

Ingestion : If swallowed, do not induce vomiting. Rinse mouth with water and drink 1 cup of water every 10 minutes for 30 minutes. Call TAMPA BAY Regional Poison Center (Tel.No.1-800-282-3171) and/or seek medical advice.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Skin and eye conditions.

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PAGE 3 OF 4  
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STABILITY : Stable  
STABILITY CONDITIONS TO AVOID : N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)  
Strong oxidizing agents, acids, epoxy resins and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS  
Gaseous combinations of carbon, hydrogen, nitrogen and oxygen may occur at elevated temperatures.

HAZARDOUS POLYMERIZATION  
Hazardous polymerization will not occur when stored and used as directed.

POLYMERIZATION CONDITIONS TO AVOID  
N.ap

#### SECTION VII - SPILL AND LEAK PROCEDURES

##### SPILLAGE

Absorb with an inert material (e.g. earth or sand). Sweep up, place into suitable labelled containers, seal and dispose of properly. Flush area with detergent and water.

##### WASTE DISPOSAL METHODS

Dispose of in accordance with Local, State and Federal Regulations.

#### SECTION VIII - SPECIAL PROTECTION INFORMATION

##### PERSONAL PROTECTIVE MEASURES

RESPIRATORY : In confined areas or where good natural/mechanical ventilation is not available, leading to a risk of exceeding the TLV's indicated, an appropriate NIOSH or MSHA approved respirator should be worn.

SKIN : Impermeable gloves, such as Neoprene or Nitrile. Wash hands with soap and water and use hand cream. Suitable protective clothing to minimize skin contact. Remove contaminated clothing and wash before reuse.

EYE : Safety glasses or goggles. Eyewash station.

##### MECHANICAL PROTECTIVE MEASURES

VENTILATION : Where adequate natural ventilation is not available provide suitable local exhaust ventilation.

##### OTHER PROTECTIVE EQUIPMENT

: Where there is a risk of contamination of footwear, safety boots should be worn and cleaned thoroughly before reuse. Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

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PAGE 4 OF 4  
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**OTHER COMMENTS**

: Where machining or abrading of cured material leads to the production of respirable and/or nuisance dust, an appropriate NIOSH or MSHA approved respirator should be worn.

**SECTION IX - SAFE HANDLING AND STORAGE**

**HANDLING AND STORAGE PRECAUTIONS**

**HANDLING**

Avoid breathing vapors and contact with skin and eyes.

**STORAGE**

Overheating may cause containers to rupture. Containers should be stored under cool, dry conditions. Empty containers will retain residue and may be dangerous. Check all containers for leaks at regular intervals and before use.

**HYGIENE PRACTICES**

When using, do not eat, drink or smoke. Remove contaminated clothing and launder before reuse. Wash hands with soap and water after handling this product.

**SECTION X - REGULATORY INFORMATION**

**SARA TITLE III - NOTIFICATION OF TOXIC CHEMICALS**

Phenol, CAS Number 108-95-2, is subject to reporting requirements under section 313 of the Superfund Amendment and Reauthorization Act of 1986 (40 CFR Part 372).

**DISCLAIMER**

To the best of our knowledge, the information contained herein is accurate. However, some of the information presented and conclusions drawn are derived from sources other than direct test data on the product itself and while Belzona Inc. believe such sources to be reliable, the information is provided without any warranty regarding its correctness. Since Belzona Inc. has no control over the conditions under which the product will be used, liability will not be assumed to exceed replacement or refund of the purchase price of this product. Except as stated herein, there are no express or implied warranties including implied warranties of merchantability or fitness for a particular purpose. Belzona Inc. assumes no liability for injury or incidental or consequential damage arising out of the storage, handling, use or disposal of this product.