



**PRODUCT NAME** : **Belzona® 2311 (SR Elastomer) Base**  
**PRODUCT NUMBER** : **1017/1374**  
**N.ap means Not Applicable**

**PAGE 2 OF 4**  
**DATE PREPARED** : **23 May, 2002**  
**NIA means No Information Available**

**EXTINGUISHING MEDIA** : Use: sand, alcohol resistant foam, carbon dioxide, chemical powder, water fog for larger fires. Do NOT use water jet.

#### **SPECIAL FIRE FIGHTING PROCEDURES**

Wear protective clothing and use self-contained breathing apparatus to protect against inhalation of poisonous vapors and other decomposition/combustion products. 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/eye contact, inhalation and ingestion.  
**PRIME HAZARD(S)** : Harmful. Sensitizer.

#### **EFFECTS OF EXPOSURE**

- Acute** : Based on the properties of the isocyanate content of this product, respiratory exposure may cause acute irritation and/or sensitization of the respiratory system, resulting in asthmatic symptoms, wheezing and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to airborne concentrations of isocyanates well below the occupational exposure limit.
- Chronic** : 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. Repeated exposure may lead to permanent respiratory disability.

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

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not risk exposure to respiratory sensitizers. Persons with a history of skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision.

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#### SECTION VI - REACTIVITY DATA

STABILITY : Stable at ambient temperatures and pressures  
STABILITY CONDITIONS TO AVOID : N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)  
Water (Carbon dioxide evolved), strong oxidizers, alcohol or amines.

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 a dry inert material (e.g. sand). Sweep up, place into suitable labelled containers, seal and dispose of properly. Flush area with dilute ammonium hydroxide or water-alcohol mixture.

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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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. Unopened 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 laundry before reuse. Wash hands with soap and water after handling this product.

**SECTION X - REGULATORY INFORMATION**

SARA TITLE III - NOTIFICATION OF TOXIC CHEMICALS

Diphenylmethanediisocyanate, CAS Number 101-68-8, 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.

<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 : 23 MAY 2002      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 : 1117/1375  
 PRODUCT NAME : Belzona® 2311 (SR Elastomer) Solidifier  
 PRODUCT CLASS : Catalysed glycol/amine blend

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

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m <sup>3</sup>	ACGIH TLV ppm	ACGIH TLV mg/m <sup>3</sup>	LD <sub>50</sub> Oral mg/Kg	LD <sub>50</sub> Dermal mg/Kg	LC <sub>50</sub> Inhal ppm
Modified Silica	5-10	67762-90-7	N.ap	N.ap	N.ap	NIA	NIA	NIA
Diethyltoluene-diamine (DETDA)	1-5	68479-98-1	NIA	NIA	10ppb (sk)*	472	>2000	>1.21mg/L/1h

(sk) = skin absorption risk      \* = supplier's recommendation

**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 : Black paste with no odor.  
 BOILING POINT : NIA      SPECIFIC GRAVITY : 1.15  
 VAPOR PRESSURE : NIA      VAPOR DENSITY : >1 (Air=1)  
 EVAPORATION RATE : N.ap      % VOLATILE BY VOLUME : N.ap  
 SOLUBILITY IN WATER : Partially miscible

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

FLASH POINT : >135°C      EXPLOSION LIMITS LOWER : NIA  
 TEST METHOD : Closed cup      UPPER : NIA

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**OSHA FLAMMABILITY CLASS** : Combustible liquid - CLASS IIIB  
**FLAMMABILITY INDEX (NFPA)** : 1 Slight  
**REACTIVITY INDEX (NFPA)** : 1 Slight  
**HEALTH HAZARD (NFPA)** : 3 Serious  
**EXTINGUISHING MEDIA** : Use: sand, alcohol resistant foam, carbon dioxide, chemical powder, water fog for larger fires. Do NOT use water jet.

#### SPECIAL FIRE FIGHTING PROCEDURES

Wear protective clothing and use self-contained breathing apparatus. Full bunker gear should be worn in extreme cases. Material supports combustion. Use water to cool containers and 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 and eye contact, ingestion, inhalation, skin absorption.  
**PRIME HAZARD(S)** : Harmful. Sensitizer.

#### EFFECTS OF EXPOSURE

**Acute** : There is no data on the product itself. This product contains Diethyltoluenediamine (DETDA). Over-exposure to aromatic diamines, through inhalation, skin contact and skin absorption can cause methemoglobinemia with symptoms of cyanosis, a purplish-blue colour of the skin, fingernails and lips, headache, and dizziness. DETDA may be absorbed through the skin and based on animal tests is expected to be harmful. Although inhalation is not expected to be a route of exposure due to low volatility, inhalation of DETDA, based on animal tests is expected to be harmful and may cause irritation of mucous membranes and upper respiratory tract.

**Chronic** : There is no data on the product itself. 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 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. 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.

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

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Persons with a history of skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision.

**SECTION VI - REACTIVITY DATA**

STABILITY : Stable

STABILITY CONDITIONS TO AVOID : N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)

Strong oxidizing agents and acids.

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. Do not allow to enter water courses.

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.

**PRODUCT NAME** : **Belzona® 2311 (SR Elastomer) Solidifier**  
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#### 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.

#### 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 contact with skin and eyes. Vapours may collect in the container headspace during transit or prolonged storage. Avoid the inhalation of vapour when opening the container.

##### 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

None of the constituents of this product are subject to reporting requirements under section 313 of the Superfund Amendment and Reauthorization Act of 1986 (40 CFR Part 372).

#### DISCLAIMER

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