

MATERIAL SAFETY DATA SHEET 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	EMERGENCY PHONE NUMBERS (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States INFORMATION PHONE NUMBER 305 594 4994 - Working hours only

SECTION I – PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1024/0866
 PRODUCT NAME : Belzona® 1111 (Super Metal) Base
 PRODUCT CLASS : Modified epoxide resin

SECTION II – HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH TLV ppm	mg/m ³	LD ₅₀ mg/Kg	Oral Dermal	LC ₅₀ Inhal ppm
DGEBA-Epoxy Resin	10-30	25068-38-6	NIA	NIA	NIA	5000	2000	NIA
DGEBF-Epoxy Resin	10-30	28064-14-4	NIA	NIA	NIA	5000	2000	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 : Dark gray paste with epoxy odor.
 BOILING POINT : Decomposes SPECIFIC GRAVITY : 2.80
 VAPOR PRESSURE : NIA VAPOR DENSITY : NIA
 EVAPORATION RATE : N.ap % VOLATILE BY VOLUME : N.ap
 SOLUBILITY IN WATER : Negligible (<0.1%)

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >239°C EXPLOSION LIMITS LOWER : NIA
 TEST METHOD : Closed Cup 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) : 2 - Can cause temporary incapacitation or residual injury.
 EXTINGUISHING MEDIA : Water fog (not a direct stream of water), foam, carbon dioxide, dry chemical.

PRODUCT NAME : Belzona® 1111 (Super Metal) Base
PRODUCT NUMBER : 1024/0866
N.ap means Not Applicable

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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, eye contact.
PRIME HAZARD(S) : Skin sensitizer and skin irritation.

EFFECTS OF EXPOSURE

Acute : Skin and eye irritation
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. Repeated skin contact may lead to irritation and to sensitization with possibly cross-sensitization to other epoxies. Product splashes in the eye may cause irritation.

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

Skin and eye conditions.

SECTION VI – REACTIVITY DATA

STABILITY : Stable
STABILITY CONDITIONS TO AVOID : N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)
Strong oxidizing agents, acids, bases and amines.

HAZARDOUS DECOMPOSITION PRODUCTS

Gaseous combinations of carbon, hydrogen and oxygen may occur at elevated temperatures (200°C).

PRODUCT NAME : Belzona® 1111 (Super Metal) Base
PRODUCT NUMBER : 1024/0866
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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 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.

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.

PRODUCT NAME : Belzona® 1111 (Super Metal) Base
PRODUCT NUMBER : 1024/0866
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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

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.

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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 ₅₀ Inhal mg/m ³
			OSHA PEL mg/m ³	ACGIH (TWA) ppm	TLV mg/m ³	LD ₅₀ 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 SPECIFIC GRAVITY : 1.66
 VAPOR PRESSURE : NIA VAPOR DENSITY : NIA
 EVAPORATION RATE : NIA % VOLATILE BY VOLUME : 0
 SOLUBILITY IN WATER : Insoluble

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >95°C EXPLOSION LIMITS LOWER : NIA
 TEST METHOD : Closed Cup 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.

PRODUCT NAME : Belzona® 1111 (Super Metal) Solidifier
PRODUCT NUMBER : 1104/0180
N.ap means Not Applicable

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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.

PRODUCT NAME : Belzona® 1111 (Super Metal) Solidifier
PRODUCT NUMBER : 1104/0180
N.ap means Not Applicable

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DATE PREPARED : 14 January 2003
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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.

PRODUCT NAME : Belzona® 1111 (Super Metal) Solidifier
PRODUCT NUMBER : 1104/0180
N.ap means Not Applicable

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DATE PREPARED : 14 January 2003
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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).

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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1004/1320
 PRODUCT NAME : Belzona® 1221 (Super E-Metal) Base
 PRODUCT CLASS : Modified epoxide resin

SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ mg/Kg	Oral	Dermal
N,N'-dialkylamino-diphenylmethane	15-40	5285-60-9	NIA	NIA	NIA	1380	3090	NIA
Modified Silica	1-5	67762-90-7	N.ap	N.ap	N.ap	5000	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 : Dark gray paste with ammoniacal odor.
 BOILING POINT : >200°C SPECIFIC GRAVITY : 2.29
 VAPOR PRESSURE : <1mm Hg @ 25°C VAPOR DENSITY : Heavier than air
 EVAPORATION RATE : N.ap % VOLATILE BY VOLUME : N.ap
 SOLUBILITY IN WATER : Immiscible

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >160°C EXPLOSION LIMITS LOWER : NIA
 TEST METHOD : Closed cup UPPER : NIA

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Base
PRODUCT NUMBER : 1004/1320
N.ap means Not Applicable

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DATE PREPARED : 10 April, 2001
NIA means No Information Available

OSHA FLAMMABILITY CLASS : N.ap
FLAMMABILITY INDEX (NFPA) : 1 Slight
REACTIVITY INDEX (NFPA) : 1 Slight
HEALTH HAZARD (NFPA) : 2 Moderate
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, ingestion.
PRIME HAZARD(S) : Sensitizer. Harmful if swallowed.

EFFECTS OF EXPOSURE

Acute : There is no data on the product itself. Harmful if swallowed.
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 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 skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision.

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Base
PRODUCT NUMBER : 1004/1320
N.ap means Not Applicable

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DATE PREPARED : 10 April, 2001
NIA means No Information Available

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.

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 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. Wear 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

: 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. Where there is a risk of contamination of footwear, safety boots should be worn and cleaned thoroughly before reuse.

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Base
PRODUCT NUMBER : 1004/1320
N.ap means Not Applicable

PAGE 4 OF 4
DATE PREPARED : 10 April, 2001
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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 contact with skin and eyes. Do not breathe vapors.

STORAGE

Overheating may cause containers to rupture. Containers should be stored under cool, dry conditions. 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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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1105/1321
 PRODUCT NAME : Belzona® 1221 (Super E-Metal) Solidifier
 PRODUCT CLASS : Polyisocyanate

SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ Oral mg/Kg	Dermal mg/Kg	LC ₅₀ Inhal ppm
DGEBA-Epoxy Resin	1-5	25068-38-6	NIA	NIA	NIA	5000	2000	NIA
Hexamethylene-Diisocyanate (HDI)	0.1-1	822-06-0	NIA	NIA	0.005ppm	710	570	310-350mg/m ³
Aliphatic polyisocyanate	60-100	28182-81-2	NIA	NIA	NIA	NIA	NIA	NIA
Modified Silica	5-10	67762-90-7	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 : Off-white paste with slight odor.
 BOILING POINT : >200°C SPECIFIC GRAVITY : 1.21
 VAPOR PRESSURE : 0.05mm Hg @ 25°C VAPOR DENSITY : Heavier than air
 EVAPORATION RATE : NIA % VOLATILE BY VOLUME : 1-5
 SOLUBILITY IN WATER : Reacts

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >165°C EXPLOSION LIMITS LOWER : NIA
 TEST METHOD : Closed cup UPPER : NIA

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Solidifier
PRODUCT NUMBER : 1105/1321
N.ap means Not Applicable

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DATE PREPARED : 3 April, 2001
NIA means No Information Available

OSHA FLAMMABILITY CLASS : N.ap
FLAMMABILITY INDEX (NFPA) : 1 Slight
REACTIVITY INDEX (NFPA) : 1 Slight
HEALTH HAZARD (NFPA) : 2 Moderate
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 contact, skin absorption, eye contact, inhalation.
PRIME HAZARD(S) : Skin sensitizer. Irritant.

EFFECTS OF EXPOSURE

Acute : Irritating to eyes and skin.
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 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 skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision.

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Solidifier
PRODUCT NUMBER : 1105/1321
N.ap means Not Applicable

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DATE PREPARED : 3 April, 2001
NIA means No Information Available

SECTION VI - REACTIVITY DATA

STABILITY : Stable

STABILITY CONDITIONS TO AVOID : N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)

Water (Carbon dioxide evolved), strong oxidizers, alcohol or amines, under uncontrolled conditions.

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.

PRODUCT NAME : Belzona® 1221 (Super E-Metal) Solidifier
PRODUCT NUMBER : 1105/1321
N.ap means Not Applicable

PAGE 4 OF 4
DATE PREPARED : 3 April, 2001
NIA means No Information Available

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 breathing vapors and contact with skin and eyes.

STORAGE

Overheating may cause containers to rupture. Unopened containers should be stored under cool, dry conditions. 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

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.

MATERIAL SAFETY DATA SHEET 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	EMERGENCY PHONE NUMBERS (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States INFORMATION PHONE NUMBER 305 594 4994 - Working hours only	

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1017/1374
 PRODUCT NAME : Belzona® 2311 (SR Elastomer) Base
 PRODUCT CLASS : Modified polyisocyanate

SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA
--

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH (TWA) TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ mg/Kg	Oral Dermal	LC ₅₀ Inhal mg/m ³
Diphenylmethane-4,4'-diisocyanate (MDI)	10	101-68-8	0.2(c)	0.02(c)	0.005	9200	NIA	490
Diphenylmethane-4,4'-diisocyanate, homopolymer	60-100	9048-58-2	NIA	NIA	NIA	NIA	NIA	NIA

(c) - ceiling limit

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 : Clear to milky white viscous liquid with no or no characteristic odor.
 BOILING POINT : NIA
 VAPOR PRESSURE : <0.5 mmHg @ 25°C
 EVAPORATION RATE : NIA
 SOLUBILITY IN WATER : Reacts

SPECIFIC GRAVITY : 1.15
 VAPOR DENSITY : 8.5
 % VOLATILE BY VOLUME : NIA

SECTION IV - FIRE AND EXPLOSION HAZARD DATA
--

FLASH POINT : >200°C
 TEST METHOD : Closed cup

EXPLOSION LIMITS LOWER : NIA
 UPPER : NIA

OSHA FLAMMABILITY CLASS : N.ap
 FLAMMABILITY INDEX (NFPA) : 1 Slight
 REACTIVITY INDEX (NFPA) : 1 Slight
 HEALTH HAZARD (NFPA) : 3 Serious

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.

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

PAGE 3 OF 4
DATE PREPARED : 23 May, 2002
NIA means No Information Available

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.

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

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

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 launder 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.

MATERIAL SAFETY DATA SHEET 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	EMERGENCY PHONE NUMBERS (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States INFORMATION PHONE NUMBER 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 ³	ACGIH TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ mg/Kg	Oral Dermal	LC ₅₀ 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

PRODUCT NAME : Belzona® 2311 (SR Elastomer) Solidifier
PRODUCT NUMBER : 1117/1375
N.ap means Not Applicable

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

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.

PRODUCT NAME : Belzona® 2311 (SR Elastomer) Solidifier
PRODUCT NUMBER : 1117/1375
N.ap means Not Applicable

PAGE 3 OF 4
DATE PREPARED : 23 May, 2002
NIA means No Information Available

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
PRODUCT NUMBER : 1117/1375
N.ap means Not Applicable

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

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

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.

MATERIAL SAFETY DATA SHEET 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 : 24 JAN 2001 PAGE 1 OF 4	
BELZONA INC., 2000 N.W. 88 COURT, MIAMI, FL 33172	EMERGENCY PHONE NUMBERS (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States INFORMATION PHONE NUMBER 305 594 4994 - Working hours only

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1291/1433
 PRODUCT NAME : Belzona® 1291
 PRODUCT CLASS : Modified epoxide resin

SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ mg/Kg	Oral Dermal	LC ₅₀ Inhal ppm
DGEBA-Epoxy Resin	10-30	25068-38-6	NIA	NIA	NIA	5000	2000	NIA
2,4,6-Tris(dimethyl-aminomethyl)phenol	1-5	90-72-2	NIA	NIA	NIA	1200	1280	NIA
Aluminum powder	5	7429-90-5	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 : Co-extruded black/grey sticks with slight odor.
 BOILING POINT : Decomposes SPECIFIC GRAVITY : 1.93
 VAPOR PRESSURE : NIA VAPOR DENSITY : NIA
 EVAPORATION RATE : N.ap % VOLATILE BY VOLUME : N.ap
 SOLUBILITY IN WATER : Insoluble

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >105°C EXPLOSION LIMITS LOWER : NIA
 TEST METHOD : Closed cup UPPER : NIA

PRODUCT NAME : Belzona® 1291
PRODUCT NUMBER : 1291/1433
N.ap means Not Applicable

PAGE 2 OF 4
DATE PREPARED : 24 January, 2001
NIA means No Information Available

OSHA FLAMMABILITY CLASS : N.ap
FLAMMABILITY INDEX (NFPA) : 1 Slight
REACTIVITY INDEX (NFPA) : 1 Slight
HEALTH HAZARD (NFPA) : 2 Moderate
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 and eye contact, skin absorption, ingestion.
PRIME HAZARD(S) : Skin sensitizer. Harmful.

EFFECTS OF EXPOSURE

Acute : There is no data on the product itself. Harmful if swallowed. Based on the properties of the epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitizer and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitization with possibly cross-sensitization to other epoxies.

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 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.

PRODUCT NAME : Belzona® 1291
PRODUCT NUMBER : 1291/1433
N.ap means Not Applicable

PAGE 3 OF 4
DATE PREPARED : 24 January, 2001
NIA means No Information Available

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 : Storage in open containers, exposure to heat or flames.

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)

Strong oxidizing agents and mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Gaseous combinations of carbon, hydrogen, oxygen and sulfur 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 : N.ap.

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® 1291
PRODUCT NUMBER : 1291/1433
N.ap means Not Applicable

PAGE 4 OF 4
DATE PREPARED : 24 January, 2001
NIA means No Information Available

OTHER PROTECTIVE EQUIPMENT

: Cotton or cotton/synthetic overalls are normally suitable.

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.

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

Aluminum powder, CAS Number 7429-90-5, a constituent of this product, 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.

MATERIAL SAFETY DATA SHEET 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 : 19 JULY 2002	PAGE 1 OF 4
BELZONA INC., 2000 N.W. 88 COURT, MIAMI, FL 33172	EMERGENCY PHONE NUMBERS (Spill, Leak, Fire, Exposure or Accident) 800 424 9300 - Toll free in United States 202 483 7616 - For calls from outside the United States INFORMATION PHONE NUMBER 305 594 4994 - Working hours only	

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER : 1200/1300
 PRODUCT NAME : Belzona® 2911 (Elastomer QD Conditioner)
 PRODUCT CLASS : Aromatic isocyanate

SECTION II - HAZARDOUS INGREDIENTS/TOXICOLOGICAL DATA

Hazardous Components	% by Weight	CAS Number	Exposure Limits			Toxicity		
			OSHA PEL mg/m ³	ACGIH TLV ppm	ACGIH TLV mg/m ³	LD ₅₀ Oral mg/Kg	Dermal	LC ₅₀ Inhal ppm
Diphenyl methane-diisocyanate (MDI)	15.9	101-68-8	0.2(c)	0.02	0.005	9200	NIA	490mg/m ³
Diphenyl methane diisocyanate homopolymer	10-30	9048-58-2	NIA	NIA	NIA	NIA	NIA	NIA
Methyl ethyl ketone	66	78-93-3	590	200	200ppm	2740	>5000	11,300 (4hr)

(c) - ceiling limit

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 : Clear brown liquid with ketone odor.
 BOILING POINT : >80°C
 VAPOR PRESSURE : 71mm Hg @ 20°C
 EVAPORATION RATE : NIA
 SOLUBILITY IN WATER : Reacts

SPECIFIC GRAVITY : 0.90
 VAPOR DENSITY : >1 (air=1)
 % VOLATILE BY VOLUME : 60-70

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : 2°C
 TEST METHOD : Closed cup

EXPLOSION LIMITS
 LOWER : 1.8%
 UPPER : 12%

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OSHA FLAMMABILITY CLASS : Flammable liquid - CLASS IB
FLAMMABILITY INDEX (NFPA) : 3 Serious
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 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

Vapors can form explosive mix with air and also vapors may travel considerable distance to source of ignition and flashback. Decomposition and combustion products may be hazardous.

SECTION V - HEALTH HAZARDS

ROUTE(S) OF ENTRY : Skin contact, skin absorption, eye contact, inhalation, ingestion.
PRIME HAZARD(S) : Harmful. Sensitizer.

EFFECTS OF EXPOSURE

Acute : There is no data on the product itself. 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. Exposure to organic solvent vapors may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the renal and central nervous systems. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness.

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. Repeated exposure may lead to permanent respiratory disability. This product contains methyl ethyl ketone which based on animal data may pose a reproductive hazard.

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.

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Ingestion : If swallowed, do not induce vomiting. Danger of aspiration of vapours if vomiting occurs. Rinse mouth with water and drink plenty of water. Call TAMPA BAY Regional Poison Center (Tel.No.1-800-282-3171) and seek medical attention immediately.

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.

SECTION VI – REACTIVITY DATA

STABILITY : Stable under recommended storage and handling conditions.

STABILITY CONDITIONS TO AVOID :

N.ap

INCOMPATIBILITY (MATERIALS TO AVOID CONTACT WITH)

Keep away from oxidising agents and strongly alkaline and strongly acidic materials. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

HAZARDOUS DECOMPOSITION PRODUCTS

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, amines and alcohols may be produced.

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

Ventilate well, stop flow of liquid. Remove ignition sources. Do not allow to enter water courses. 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 dilute ammonium hydroxide solution 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, Nitrile or PVA. 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.

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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.

SECTION IX - SAFE HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS

HANDLING

Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour with air. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep the container tightly closed when not in use. Exclude sources of heat, sparks and open flame.

STORAGE

Observe the label precautions. Store between 5°C and 30°C unless otherwise stated in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers that are opened should be properly resealed and kept upright to prevent spillage. Store separately from oxidising agents and strongly alkaline and strongly acidic materials, amines and alcohols.

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

Diphenylmethane-diisocyanate (MDI) and methyl ethyl ketone, constituents of this product, are subject to the reporting requirements of 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.

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