Safety Data Sheet

GenFlex Roofing Systems

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name

One Step Pourable Sealer Part A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)

Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer

Firestone Building Products Company

250 West 96th Street Indianapolis, IN 46260 United States

genflexmsds@bfdp.com

Telephone (General) • 800-428-4442

1.4 Emergency telephone number

Manufacturer

• (800) 424-9300 - CHEMTREC

Manufacturer

• (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP

Skin Irritation 2 - H315
 Skin Sensitization 1 - H317

Eye Irritation 2 - H319

Acute Toxicity Inhalation 4 - H332 Respiratory Sensitization 1 - H334

Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335

Carcinogenicity 2 - H351

Specific Target Organ Toxicity Repeated Exposure 2 - H373

DSD/DPD

 Harmful (Xn) Irritant (Xi)

> Carcinògénic Substances - Category 3 R20, R36/37/38, R40, R42/43, R48/20

2.2 Label Elements

CLP

DANGER





Hazard statements • H315 - Causes skin irritation

- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H332 Harmful if inhaled
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335 May cause respiratory irritation
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- **Prevention** P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P260 Do not breathe mist/vapours/spray.
 - P264 Wash thoroughly after handling.
 - P271 Use only outdoors or in a well-ventilated area.
 - P272 Contaminated work clothing should not be allowed out of the workplace.
 - P280 Wear protective gloves, clothing, and eye/face protection, .
 - P281 Use personal protective equipment as required.
 - P285 In case of inadequate ventilation wear respiratory protection.

Response • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P321 - Specific treatment, see supplemental first aid information.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention. P308+P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

Storage/Disposal • P403+P233 - Store in a well-ventilated place. Keep container tightly closed. Keep away from moisture.

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Supplemental information • 59 percent of this product consists of an ingredient of unknown toxicity.





Risk phrases • R20 - Harmful by inhalation.

R36/37/38 - Irritáting to eyes, respiratory system and skin.

R40 - Limited evidence of a carcinogenic effect.

R42/43 - May cause sensitisation by inhalation and skin contact.

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases • S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S37 - Wear suitable gloves.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 - Avoid exposure - obtain special instructions before use.

2.3 Other Hazards

CLP

According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD

According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

 Skin Irritation 2 Skin Sensitization 1A Eve Irritation 2

Respiratory Sensitization 1A

Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements **OSHA HCS 2012**

DANGER





Hazard statements • Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention • Do not breathe mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves, clothing, and eye/face protection, . In case of inadequate ventilation wear respiratory protection.

Response • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

If on skin: Wash with plenty of water

Specific treatment, see supplemental first aid information. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Get medical advice/attention if you feel unwell.

Storage/Disposal • Store in a well-ventilated place. Keep container tightly closed.

Keep away from moisture.

Dispose of content and/or container in accordance with local, regional, national, and/or

international regulations.

2.3 Other hazards

OSHA HCS 2012

Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS

 Very Toxic - D1A Other Toxic Effects - D2A

2.2 Label elements WHMIS

Other Toxic Effects - D2B





Very Toxic - D1A
 Other Toxic Effects - D2A
 Other Toxic Effects - D2B

2.3 Other hazards WHMIS

• In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

Material does not meet the criteria of a substance.

3.2 Mixtures

			Composition	on	
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Isocyanic acid, methylenedi-p- phenylene ester	CAS:101-68-8 EC Number:202- 966-0 EU Index:615- 005-00-9	20% TO 40%	Ingestion/Oral-Rat LD50 • 9200 mg/kg Inhalation-Rat LC50 • 178 mg/m³	EU DSD/DPD: Annex VI, Table 3.2: Carc. Cat. 3; R40; Xn R20-48/20; Xi R36/37/38 R42/43 EU CLP: Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 4, H332; STOT RE 2, H373; Eye Irrit. 2, H319; Skin Irrit. 2, H315; STOT SE 3, H335; Resp. Sens. 1, H334; Skin Sens. 1, H317 OSHA HCS 2012: Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1A; STOT SE 3: Resp. Irrit.; Resp. Sens. 1A; STOT RE 1 (Lungs);	NDA
Siloxanes and Silicones, di-Me, reaction products with silica	CAS: 67762-90-7	1% TO 5%	NDA	EU DSD/DPD: Not Classified EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Propane, 1,2-epoxy-	CAS:75-56-9 EC Number:200- 879-2 EU Index:603- 055-00-4	< 0.1%	Ingestion/Oral-Rat LD50 • 380 mg/kg Inhalation-Rat LC50 • 4000 ppm 4 Hour(s) Skin-Rabbit LD50 • 1500 µL/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA
Furan	CAS:110-00-9 EC Number:203- 727-3 EU Index:603- 105-00-5	< 0.1%	NDA	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA
	CAS:7440-48-4 EC				

Cobalt	Number:231- 158-0 EU Index:027- 001-00-9	0.1%	Ingestion/Oral-Rat LD50 • 6171 mg/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA
Acetaldehyde	CAS:75-07-0 EC Number:200- 836-8 EU Index:605- 003-00-6	< 0.1%	Ingestion/Oral-Rat LD50 • 661 mg/kg Inhalation-Rat LC50 • 13300 ppm 4 Hour(s) Skin-Rabbit LD50 • 3540 mg/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

 Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately.

Skin

 Remove contaminated clothing and shoes. Wash immediately with soap and water for at least 15 minutes. Discard contaminated shoes and clothing. If irritation develops and persists, get medical attention.

Eye

 Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. If eye irritation persists: Get medical advice/attention.

Ingestion

Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

All treatments should be based on observed signs and symptoms of distress in the
patient. Consideration should be given to the possibility that overexposure to materials
other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Carbon Dioxide, Dry Chemical, Foam.

Unsuitable Extinguishing Media

Do not use water.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

 Reacts with water and emits carbon dioxide gas. Exposure to water will initiate reaction, which may be violent.

The product is not flammable. However, it will burn if strongly heated and when involved in fire.

Hazardous Combustion Products

Carbon oxides. Nitrogen oxides. Hydrocarbons. Isocyanates.

5.3 Advice for firefighters

 Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Wear positive pressure self-contained breathing apparatus (SCBA).

Move containers from fire area if you can do it without risk.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate
personal protective equipment, avoid direct contact. Do not touch damaged containers
or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

As an immediate precautionary measure, isolate spill or leak area for at least 50
meters (150 feet) in all directions. ELIMINATE all ignition sources (no smoking, flares,
sparks or flames in immediate area). Stay upwind. Keep out of low areas. Keep
unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

. Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

Stop leak if you can do it without risk.
 Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
 LARGE SPILLS: Dike far ahead of spill for later disposal.
 Never return spills in original containers for re-use.

6.4 Reference to other sections

 Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

Use only in well ventilated areas. Use good safety and industrial hygiene practices. Wear appropriate personal protective equipment, avoid direct contact. Do not breath mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Keep away from incompatible materials.

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

	Exposure Limits/Guidelines						
	Result	ACGIH	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick	
Acetaldehyde (75-07-0)	Ceilings	25 ppm Ceiling	25 ppm Ceiling; 45 mg/m3 Ceiling	25 ppm Ceiling	25 ppm Ceiling	25 ppm Ceiling; 45 mg/m3 Ceiling	
Propane, 1,2- epoxy- (75-56-9)	TWAs	2 ppm TWA	2 ppm TWA; 4.7 mg/m3 TWA	2 ppm TWA	2 ppm TWA	20 ppm TWA; 48 mg/m3 TWA	
Cobalt (7440-48-4)	TWAs	0.02 mg/m3 TWA	0.02 mg/m3 TWA	0.02 mg/m3 TWA	0.02 mg/m3 TWA	0.02 mg/m3 TWA	
						0.005 ppm TWA (listed under	

Isocyanic acid, methylenedi-p- phenylene ester (101-68-8)	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA; 0.05 mg/m3 TWA	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Methylene bisphenyl isocyanate); 0.051 mg/m3 TWA (listed under Methylene bisphenyl isocyanate)
	Ceilings	Not established	Not established	0.01 ppm Ceiling (listed under Methylene bisphenyl isocyanate (MDI))	Not established	Not established
		Ex	posure Limits/Gui	delines (Con't.)		
	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
	STELs	150 ppm STEL; 270 mg/m3 STEL	Not established	150 ppm STEL; 270 mg/m3 STEL	Not established	Not established
Acetaldehyde (75-07-0)	TWAs	100 ppm TWA; 180 mg/m3 TWA	Not established	100 ppm TWA; 180 mg/m3 TWA	Not established	Not established
	Ceilings	Not established	25 ppm Ceiling	Not established	25 ppm Ceiling	25 ppm Ceiling; 45 mg/m3 Ceiling
Propane, 1,2-	STELs	30 ppm STEL; 71 mg/m3 STEL	Not established	30 ppm STEL; 71 mg/m3 STEL	Not established	Not established
epoxy- (75-56-9)	TWAs	20 ppm TWA; 47 mg/m3 TWA	2 ppm TWA	20 ppm TWA; 47 mg/m3 TWA	2 ppm TWA	20 ppm TWAEV; 48 mg/m3 TWAEV
Cobalt	STELs	0.3 mg/m3 STEL (dust and fume)	Not established	0.3 mg/m3 STEL (dust and fume)	Not established	Not established
(7440-48-4)	TWAs	0.1 mg/m3 TWA (dust and fume)	0.02 mg/m3 TWA	0.1 mg/m3 TWA (metal, dust and fume)	0.02 mg/m3 TWA	0.02 mg/m3 TWAEV
Isocyanic acid, methylenedi-p- phenylene ester (101-68-8)	TWAs	Not established	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.005 ppm TWA (designated substances regulation, listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))); 0.005 ppm TWA (applies to workplaces to which the designated substances regulation does not apply, listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWAEV; 0.051 mg/m3 TWAEV
	Ceilings	Not established	Not established	Not established	0.02 ppm Ceiling (designated substances regulation, listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI)))	Not established

		Exposure	Limits/Guidelines (C	on't.)	
	Result	Canada Saskatchewan	Canada Yukon	NIOSH	OSHA
Acetaldehyde	STELs	Not established	150 ppm STEL; 270 mg/m3 STEL	Not established	Not established
(75-07-0)	TWAs	Not established	100 ppm TWA; 180 mg/m3 TWA	Not established	200 ppm TWA; 360 mg/m3 TWA
Propane, 1,2-epoxy-	TWAs	2 ppm TWA	100 ppm TWA; 240 mg/m3 TWA	Not established	100 ppm TWA; 240 mg/m3 TWA
(75-56-9)		Not established	150 ppm STEL; 360 mg/m3 STEL	Not established	Not established
Cobalt (7440-48-4)	TWAs	0.02 mg/m3 TWA	0.05 mg/m3 TWA (dust and fume)	0.05 mg/m3 TWA (dust and fume)	0.1 mg/m3 TWA (dust and fume)
	STELs	Not established	0.15 mg/m3 STEL (dust and fume)	Not established	Not established
Isocyanic acid,	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.05 mg/m3 TWA	Not established
methylenedi-p- phenylene ester (101-68-8)	Ceilings	Not established	0.02 ppm Ceiling (Methylene bisphenyl isocyanate (MDI)); 0.2 mg/m3 Ceiling (Methylene bisphenyl isocyanate (MDI))	0.020 ppm Ceiling (10 min); 0.2 mg/m3 Ceiling (10 min)	0.02 ppm Ceiling; 0.2 mg/m3 Ceiling

Exposure Control Notations

Canada Ontario

•Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Designated Substances:** (0.005 ppm TWA (listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))); 0.02 ppm Ceiling (listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))))

Canada Quebec

- •Acetaldehyde (75-07-0): **Carcinogens:** (C3 carcinogen effect detected in animals)
- •Cobalt (7440-48-4): Carcinogens: (C3 carcinogen effect detected in animals)
- •Propane, 1,2-epoxy- (75-56-9): **Carcinogens:** (C2 carcinogen effect suspected in humans)

ACGIH

- •Acetaldehyde (75-07-0): Carcinogens: (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- •Cobalt (7440-48-4): Carcinogens: (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- •Propane, 1,2-epoxy- (75-56-9): **Carcinogens:** (A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans) | **Sensitizers:** (Sensitizer)

Exposure Limits Supplemental ACGIH

- •Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **TLV Basis Critical Effects:** (respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI)))
- •Acetaldehyde (75-07-0): **TLV Basis Critical Effects:** (eye and upper respiratory tract irritation) | **Notice of Intended Changes (TLVs):** (25 ppm Ceiling; A2 suspected human carcinogen; TLV basis: eye and upper respiratory tract irritation)
- •Cobalt (7440-48-4): **BEIs:** (15 μg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (background); 1 μg/L Medium: blood Time: end of shift at end of workweek Parameter: Cobalt (background, semi-quantitative)) | **TLV Basis Critical Effects:** (asthma; myocardial effects; pulmonary function)
- •Propane, 1,2-epoxy- (75-56-9): **TLV Basis Critical Effects:** (eye and upper respiratory tract irritation) | **Notice of Intended Changes** (**TLVs**): (Proposed update of SEN notation to DSEN to indicate dermal sensitizer)

8.2 Exposure controls

Engineering Measures/Controls

This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face Skin/Body

- Wear safety goggles. Use face shield in case of splash risk.
- Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure.

Environmental Exposure Controls

In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

American Conference of Governmental Industrial Hygiene

= Biological Exposure Indices

BEI

MSHA = Mine Safety and Health Administration National Institute of Occupational Safety

and Health

Occupational Safety and Health OSHA = Administration

= Short Term Exposure Limits are based on 15-minute exposures

Threshold Limit Value determined by the American Conference of Governmental TLV Industrial Hygienists (ACGIH)

TWAEV = Time-Weighted Average Exposure Value

= Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Tan viscous liquid with faint aromatic odor.
Color	Tan	Odor	Faint Aromatic.
Odor Threshold	Data lacking		
General Properties			-
Boiling Point	Data lacking	Melting Point	Not relevant
Decomposition Temperature	Data lacking	рН	Data lacking
Specific Gravity/Relative Density	= 1.1	Water Solubility	Exposure to water will initiate reaction, which may be violent.
Viscosity	6700 Centipoise (cPs, cP) or mPas @ 75 F(23.8889 C)	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	Volatiles (Wt.)	< 0.15 %
Volatiles (Vol.)	< 0.15 %		
Flammability		•	-
Flash Point	> 199.4 F(> 93 C) PMCC (Pensky- Martins Closed Cup)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		

Environmental		
Octanol/Water Partition coefficient	Data lacking	

9.2 Other Information

No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

• Exposure to water will initiate reaction, which may be violent. CO2 gas is produced.

10.2 Chemical stability

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

• Keep away from heat, sparks and flame.

10.5 Incompatible materials

• Water. Alcohol. Alkaline metals. Acids. Bases.

10.6 Hazardous decomposition products

. None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

		Components
Isocyanic acid, methylenedi-p- phenylene ester (20% TO 40%)	101-68- 8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 9200 mg/kg; Behavioral:Somnolence (general depressed activity); Behavioral:Ataxia; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Body temperature decrease; Inhalation-Rat TCLo • 2.4 mg/m³ 6 Hour(s); Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration:Other changes; Biochemical:Metabolism (intermediary):Other proteins; Irritation: Eye-Rabbit • 100 mg • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s)
Siloxanes and Silicones, di-Me, reaction products with silica (1% TO 5%)	67762- 90-7	Multi-dose Toxicity: Inhalation-Rat TCLo • 30 mg/kg 6 Hour(s) 4 Week(s)-Intermittent; Lungs, Thorax, or Respiration:Other changes; Blood:Hemorrhage; Related to Chronic Data:Death in the Other Multiple Dose data type field

GHS Properties	Classification
Acute toxicity	EU/CLP • Acute Toxicity - Inhalation 4 - ATEmix(inhl) = 1.537 mg/L OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Carcinogenicity 2 OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	EU/CLP • Skin Sensitizer 1 OSHA HCS 2012 • Skin Sensitizer 1A
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Respiratory Sensitizer 1 OSHA HCS 2012 • Respiratory Sensitizer 1A
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2

Potential Health Effects Inhalation

Acute (Immediate) Chronic (Delayed)

- Harmful if inhaled. May cause respiratory irritation.
- Vapors can induce respiratory allergic sensitization with asthma-like symptoms. Symptoms include chronic cough, tightness of chest with difficulty in breathing. These symptoms may be immediate or delayed up to several hours after exposure.

Skin

Acute (Immediate)

- Causes skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash.
- Chronic (Delayed)

Eve

Acute (Immediate)

Chronic (Delayed)

Ingestion

Acute (Immediate)

Chronic (Delayed)

Other

Chronic (Delayed)

- Causes serious eye irritation.
- No data available.

No data available

- Ingestion may cause vomiting, nausea, diarrhea, or other systemic effects.
- No data available.

 Long-term effect of Isocyanic acid, methylenedi-p-phenylene ester on the respiratory system of 318 workers suggests that such workers may develop fibrosis. Long-term exposure tends to restrict pulmonary function and cause decrease in CO single breath transfer factor.

Carcinogenic Effects

Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects					
	CAS	IARC	NTP		
Acetaldehyde	75-07-0	Group 1-Carcinogenic	Reasonably Anticipated to be Human Carcinogen		
Cobalt	7440-48-4	Group 2B-Possible Carcinogen	Not Listed		
Furan	110-00-9	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen		
Propane, 1,2-epoxy-	75-56-9	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen		

Key to abbreviations

LD = Lethal Dose

TC = Toxic Concentration

Section 12 - Ecological Information

12.1 Toxicity

One Step Pourable Sealer Part A					
Dosage	Species	Duration	Results	Exposure Conditions	Comments
11 mg/L	Algae: NDA	96 Hour(s)	EC50	NDA	Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-
90 mg/L	Crustacea: Daphnia	48 Hour(s)	EC50	NDA	Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-
200 mg/L	Fish: NDA	96 Hour(s)	LC50	NDA	Ethylenediamine, N-(3-(trimethoxysilyl)propyl)-
>100 mg/L	Crustacea: Daphnia	24 Hour(s)	EC50	NDA	2(2-Hydroxy-3,5-diteramylphenyl) benzotriazole
>10 mg/L	Algae: NDA	72 Hour(s)	IC50	NDA	2(2-Hydroxy-3,5-diteramylphenyl) benzotriazole
>100 mg/L	Fish: NDA	96 Hour(s)	LC50	NDA	2(2-Hydroxy-3,5-diteramylphenyl) benzotriazole
20 mg/L	Crustacea: Daphnia	24 Hour(s)	EC50	NDA	Bis(1-2,2,5,6-pentamethyl-4-piperdinyl)decanoate
>100 mg/L	Other: Bacteria	3 Hour(s)	EC50	NDA	Bis(1-2,2,5,6-pentamethyl-4-piperdinyl)decanoate
0.97 mg/L	Fish: NDA	96 Hour(s)	LC50	NDA	Bis(1-2,2,5,6-pentamethyl-4-piperdinyl)decanoate

The product is not classified as environmentally hazardous. However, this does not
exclude the possibility that large or frequent spills can have a harmful or damaging
effect on the environment. An environmental hazard cannot be excluded in the event of
unprofessional handling or disposal.

12.2 Persistence and degradability

Expected to be persistent.

12.3 Bioaccumulative potential

Not expected to bioaccumulate.

12.4 Mobility in Soil

Water reactive material.

12.5 Results of PBT and vPvB assessment

No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

. No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA

TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for • None specified. user

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic

State Right To Know					
Component	CAS	MA	NJ	PA	
Acetaldehyde	75-07-0	Yes	Yes	Yes	
Cobalt	7440-48-4	Yes	Yes	Yes	
Furan	110-00-9	Yes	Yes	Yes	
Isocyanic acid, methylenedi-p- phenylene ester	101-68-8	No	No	Yes	
Propane, 1,2- epoxy-	75-56-9	Yes	Yes	Yes	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	No	No	No	

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Acetaldehyde	75-07-0	Yes	No	Yes	No	Yes
Cobalt	7440-48-4	Yes	No	Yes	No	Yes
Furan	110-00-9	Yes	No	Yes	No	Yes
Isocyanic acid, methylenedi-p- phenylene ester	101-68-8	Yes	No	Yes	No	Yes
Propane, 1,2- epoxy-	75-56-9	Yes	No	Yes	No	Yes
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Yes	No	No	No	Yes

Canada

Labor		
Canada - WHMIS - Classifications of Substances		
Propane, 1,2-epoxy-	75-56-9	B2, D1B, D2A, D2B
• Furan	110-00-9	B2, D1A, D2A
Acetaldehyde	75-07-0	B2, D2A
 Isocyanic acid, methylenedi-p-phenylene ester 	101-68-8	D1A, D2A, D2B
Cobalt	7440-48-4	D2A, D2B
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
Canada - WHMIS - Ingredient Disclosure List		
Propane, 1,2-epoxy-	75-56-9	1 %
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	1 %
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	0.1 %
Cobalt	7440-48-4	0.1 %
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Environment Canada - CEPA - Priority Substances List		
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Priority Substance List 2 (substance considered toxic)
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

Europe

Other EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification		
• Propane, 1,2-epoxy-	75-56-9	F+; R12 Xn; R20/21/22 Xi; R36/37/38 Carc.Cat.2; R45 Muta.Cat.2; R46
• Furan	110-00-9	F+; R12 R19 Xn; R20/22-48/2: Xi; R38 Carc.Cat.2; R45 R52- 53 Muta.Cat.3; R68
Acetaldehyde	75-07-0	F+; R12 Xi; R36/37 Carc.Cat.3 R40
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43
Cobalt	7440-48-4	R42/43 R53
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits		
• Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5%<=C: Xi; R:36/37/38 0.1% <=C: R:42
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• Propane, 1,2-epoxy-	75-56-9	F+ T R:45-46-12-20/21/22- 36/37/38 S:53-45
	_	

• Furan	110-00-9	F+ T R:45-12-19-20/22-38- 48/22-68-52/53 S:53-45-61
Acetaldehyde	75-07-0	F+ Xn R:12-36/37-40 S:(2)-16- 33-36/37
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn R:20-36/37/38-40-42/43- 48/20 S:(1/2)-23-36/37-45
• Cobalt	7440-48-4	Xn R:42/43-53 S:(2)-22-24-37- 61
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• Propane, 1,2-epoxy-	75-56-9	E
• Furan	110-00-9	E
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	C, 2
• Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• Propane, 1,2-epoxy-	75-56-9	S:53-45
• Furan	110-00-9	S:53-45-61
Acetaldehyde	75-07-0	S:(2)-16-33-36/37
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	S:(1/2)-23-36/37-45
• Cobalt	7440-48-4	S:(2)-22-24-37-61
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

United States

Labor		
U.S OSHA - Process Safety Management - Highly Hazardous Chemicals		
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	500 lb TQ
Acetaldehyde	75-07-0	2500 lb TQ
 Isocyanic acid, methylenedi-p-phenylene ester 	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S OSHA - Specifically Regulated Chemicals		
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
Propane, 1,2-epoxy-	75-56-9	
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	(listed under Methylene diphenyl diisocyanate)
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

U.S CERCLA/SARA - Hazardous Substances and their Reportable Quantities		100 lb final RQ; 45.4 kg final
Propane, 1,2-epoxy-	75-56-9	RQ
• Furan	110-00-9	100 lb final RQ; 45.4 kg final RQ
Acetaldehyde	75-07-0	1000 lb final RQ; 454 kg final RQ
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5000 lb final RQ; 2270 kg final RQ
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S CERCLA/SARA - Radionuclides and Their Reportable Quantities		
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
Propane, 1,2-epoxy-	75-56-9	100 lb EPCRA RQ
• Furan	110-00-9	100 lb EPCRA RQ
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
Propane, 1,2-epoxy-	75-56-9	10000 lb TPQ
• Furan	110-00-9	500 lb TPQ
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S CERCLA/SARA - Section 313 - Emission Reporting		
• Propane, 1,2-epoxy-	75-56-9	0.1 % de minimis concentration
• Furan	110-00-9	0.1 % de minimis concentration
Acetaldehyde	75-07-0	0.1 % de minimis concentration
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates)
• Cobalt	7440-48-4	0.1 % de minimis concentration
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing		
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing • Propane, 1,2-epoxy-	75-56-9	Not Listed
U.S CERCLA/SARA - Section 313 - PBT Chemical ListingPropane, 1,2-epoxy-Furan	75-56-9 110-00-9	Not Listed Not Listed

Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S RCRA (Resource Conservation & Recovery Act) - Constituents for Detection	on Monitoring	
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	(total)
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S RCRA (Resource Conservation & Recovery Act) - List for Hazardous Cons	stituents	
• Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	(total)
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground W.	ater Monitoring	
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	(total)
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
U.S RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acute Characteristics	ly Toxic Wastes &	Other Hazardous
Propane, 1,2-epoxy-	75-56-9	Not Listed
• Furan	110-00-9	waste number U124 (Ignitable waste)
Acetaldehyde	75-07-0	waste number U001 (Ignitable waste)
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Cobalt	7440-48-4	Not Listed
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed

United States - California

J.S California - Proposition 65 - Carcinogens List		
Propane, 1,2-epoxy-	75-56-9	carcinogen, initial date 10/1/8
Furan	110-00-9	carcinogen, initial date 10/1/9
Acetaldehyde	75-07-0	carcinogen, initial date 4/1/88
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Cobalt	7440-48-4	carcinogen, initial date 7/1/92 (powder)
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
J.S California - Proposition 65 - Developmental Toxicity		
Propane, 1,2-epoxy-	75-56-9	Not Listed
Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed

 Isocyanic acid, methylenedi-p-phenylene ester Cobalt Siloxanes and Silicones, di-Me, reaction products with silica 	101-68-8 7440-48-4 67762-90-7	Not Listed Not Listed Not Listed	
U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)			
Propane, 1,2-epoxy-	75-56-9	Not Listed	
• Furan	110-00-9	Not Listed	
Acetaldehyde	75-07-0	Not Listed	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed	
Cobalt	7440-48-4	Not Listed	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed	
U.S California - Proposition 65 - No Significant Risk Levels (NSRL)			
Propane, 1,2-epoxy-	75-56-9	Not Listed	
• Furan	110-00-9	Not Listed	
Acetaldehyde	75-07-0	90 μg/day NSRL (inhalation)	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed	
Cobalt	7440-48-4	Not Listed	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed	
U.S California - Proposition 65 - Reproductive Toxicity - Female			
Propane, 1,2-epoxy-	75-56-9	Not Listed	
• Furan	110-00-9	Not Listed	
Acetaldehyde	75-07-0	Not Listed	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed	
Cobalt	7440-48-4	Not Listed	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed	
U.S California - Proposition 65 - Reproductive Toxicity - Male			
• Propane, 1,2-epoxy-	75-56-9	Not Listed	
• Furan	110-00-9	Not Listed	
Acetaldehyde	75-07-0	Not Listed	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed	
• Cobalt	7440-48-4	Not Listed	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed	

United States - Pennsylvania

Propane, 1,2-epoxy-	75-56-9	
• Furan	110-00-9	
• Acetaldehyde	75-07-0	
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	
Cobalt	7440-48-4	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Not Listed
J.S Pennsylvania - RTK (Right to Know) - Special Hazardous Substance • Propane, 1,2-epoxy-	s 75-56-9	
• Furan	110-00-9	Not Listed
Acetaldehyde	75-07-0	Not Listed
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
Cobalt	7440-48-4	Not Listed
Coball		

15.2 Chemical Safety Assessment

• No Chemical Safety Assessment has been carried out.

15.3 Other Information

 WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

Last Revision Date Preparation Date Disclaimer/Statement of Liability

- 20/February/2015
- 01/August/2012
- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

Key to abbreviations NDA = No Data Available