

**Description**

Firetemp® CI caulk is a latex-based, intumescent caulk designed to stop the passage of fire, smoke, and fumes through fire-rated separations. Firetemp® CI caulk forms a durable and flexible seal after curing.

**Applications**

Firetemp® CI caulk provides an effective firestop between penetrating materials, such as metal pipes, conduit, cables, and ducts, and most common floor, wall, ceiling, and joint construction, in any combination of wood, concrete, concrete block, steel and gypsum materials.

**Advantages**

**Intumescent.** When exposed to high temperatures or fire, Firetemp® CI caulk expands in volume to quickly close off voids left by melting or burning construction materials. After fully cured Firetemp® CI can be painted over using a latex-based paint.

**Single Component**

Firetemp® CI caulk can be installed directly into an opening or joint without mixing or the use of additional materials such as metal collars or wraps. This simplifies installation and minimizes the materials needed at the jobsite.

**Versatility**

Firetemp® CI caulk adheres easily to dry or damp concrete, wood, metal, and other common building material surfaces.

**Flexibility**

Firetemp® CI caulk, when used in joints, accommodates up to 33 percent joint movement compression/extension. It remains flexible and fully resistant to water after curing.

**Systems Testing and Standards**

Firetemp® CI caulk has been tested for hundreds of firestop installations and meets or

exceeds the requirements of ASTM E 814, ASTM E 119, UL 1479, UL 2079, ULC S115-M95, and CAN/ULC S101. Underwriters Laboratories (UL) is a third party, fire endurance testing agency accredited by ICBO, BOCA and SBCCI (National Evaluation Services) in the United States.

Firetemp® CI caulk becomes an integral component in a complete building system of walls, pipe penetrations, HVAC ducts, joints, and the like. For this reason, its physical compatibility to other products used in these complex configurations requires more than the routine firestopping product testing. The results of these additional tests are listed in Table 1, Firetemp® CI Caulk Physical & Chemical Properties.

Firetemp® CI caulk has proven that it has all of the physical characteristics desired in a firestopping product. Once installed and cured, it has excellent stability, even after four weeks at freezing temperatures of -15°F (-26°C) and exposure to extreme temperatures of 300°F (149°C) for 24 hours. Dimensional changes were well within the accepted standards (<2% per ASTM C 356). Dynamic testing has demonstrated Firetemp® CI caulk's highly elastic properties.

When tested in simulated fire conditions, this intumescent caulk expanded uniformly, to at least eight times its original volume, without causing failure to other components. When tested per ASTM E 84, the flame spread was <25 and smoke developed was <50.

Corrosion and microbial growth were tested using procedures outlined in ASTM C 665. Firetemp® CI caulk does not promote the corrosion of steel, copper, or aluminum, but may cause discoloration on galvanized metal surfaces. Also, Firetemp® CI caulk does not support mold growth.

Disclaimer: All technical advice, recommendations and services rendered by the seller are gratis. They are based on technical data which the seller believes to be reliable and are intended for use by persons having the skills and know how, at their own discretion and risk. In no event will the seller be liable for any consequential damages arising out of the use of this product.



The use of Firetemp® CI caulk will restore the acoustical performance level (STC rating) to firewall systems used in standard building construction when tested according to ASTM-E 90-90.

**Installation**

Firetemp® CI caulk is installed with standard as well as reloadable caulking guns. Priming is not required before use. (See Installation section for more detailed procedures.)

**Limitations**

This product cures naturally through the evaporation of its water content and is water resistant after fully cured. Exposure to rain, running or standing water before the sealant is fully cured may cause the installed materials to wash out. This product is not designed to be a waterproof seal and should not be installed where there will be constant wet conditions nor immersed in water continuously. Refer to Water Resistance, Table 1.

**Availability**

- 10.1 oz (300ml) plastic cartridge
- 20 oz (600ml) foil (sausage) pack
- 29 oz (850ml) jumbo cartridge
- 5 gallon (18.9L) plastic tapered pails (12 cartridges/sausages per box).

**Coverage**

Estimated product usage will vary depending upon firestopping configuration. Check estimating chart for coverage.

**Warranty**

Johns Manville will not accept liability for more than product refund. Any claim regarding product defect must be received in writing within 1 year from date of shipment. Johns Manville makes no other Warranty or Guar-

-antee, expressed or implied including warranties of fitness for a particular purpose or merchantability. The seller shall assume no other liability for incidental or consequential damages arising out of the sale or use of this product.

**Technical Services**

For technical information and assistance regarding application information, code approvals and performance specifications, call 1-888-322-1129. Outside of the USA and in Canada, call (604) 515-1788. If this piece is more than one year old, please contact Johns Manville for the current information.

**Storage & Transportation**

Firetemp® CI should be stored in an area where the temperature range is between 4° C - 32° C (40°F - 90° F). **DO NOT ALLOW TO FREEZE.** Keep product stored under protective cover in its original sealed container. Recommended transportation temperature range is 7 C - 32° C (45° F - 90° F ). Products have a shelf life of 1 year and a stock rotation program is recommended.

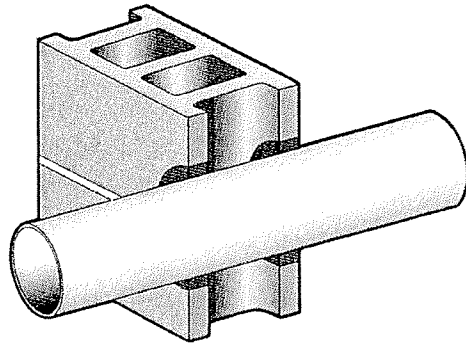
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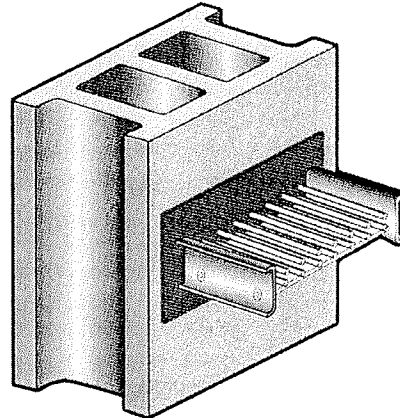
**Table 1.**

**Physical and Chemical Properties**

Property	Firetemp CI Caulk
Colour	Rust red
Density	90-100 pcf
PH	8
Viscosity	640,000 cps
Moisture Adsorption (Wt%)	< 4%
Solids Content (Wt%)	82%
Elasticity	up to 33%
Intumescence	800%
UV Resistance (QEV High Intensity Cycle)	
1500 hrs, 200 cycles	Pass
Stability (dimension, cracks, blisters, exfoliation, flexibility)	
Freezing: -15°F (-26°C), 28 days	Pass
75–120°F (24–49°C), 28 days	Pass
200°F (93°C), 24 hours	Pass
300°F (149°C), 24 hours	Pass
Dimensional Change	
Freezing: -120°F (-84°C), 28 days	< 0.3%
300°F (149°C), 24 hours	< 1.5%
Corrosion (ASTM C 665)	
Steel	Pass
Copper	Pass
Aluminum	Pass
Stress Corrosion Cracking for Austenitic	
Stainless Steel (ASTM C 692)	Pass
Microbial Growth (ASTM C 665)	Pass
Surface Burning Characteristics (ASTM E 84)	
Flame	10
Smoke	10
Smoke Toxicity NBS Chamber (ASTM E 800)	Pass
STC Breached Wall Recovery (full, partial, none) (ASTM E 90-90)	Full
Storage Temperature 4° C - 32° C (45° F - 90° F )	
Application Temperature 4° C - 32° C (45° F - 90° F )	
In Service Temp up to 49° C (120°F)	



Typical Pipe Penetrations



Typical Cable Penetrations

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**Section 1 - Chemical Product and Company Identification**

**Product Name** Firetemp® Firestop

**CAS#** Mixture

**Generic Name** Coating (Latex)

**Formula** Mixture

**Chemical Name:** Mixture

**Hazard Label** L2100

**Manufacturer Information**

Johns Manville Insulation Group

Fire Protection Systems

P.O. Box 5108

Denver, CO 80127

Telephone: 303-978-2000 8:00AM-5:00PM M-F

Internet Address: <http://www.jm.com>

Emergency: 800-424-9300 (Chemtrec, In English)

**Trade Names:** Firetemp® Firestop (CI, SI)

**Section 2 - Composition / Information on Ingredients**

CAS #	Component	Percent
Proprietary	Vinyl acrylic copolymer	35-65
1317-65-3	Calcium carbonate	25-50
7732-18-5	Water	15-30
7782-42-5	Graphite	3-15
57-55-6	1,2-Propylene glycol	0.5-5
13463-67-7	Titanium dioxide	<1
1309-37-1	Iron oxide	<0.5
1317-61-9	Ferric oxide black	<0.1
Not Available	Blue pigment	<0.1

**Additional Component Information**

Product is latex-based.

**Section 3 - Hazards Identification**

**Emergency Overview**

APPEARANCE AND ODOR: CI (Caulk): red. SI (Spray): Light blue.

Under normal conditions of use and handling, this product is not expected to create any health or safety hazards.

**Potential Health Effects**

**Summary**

Due to the form of the product hazardous exposures are unlikely to occur. Exposure may cause slight temporary irritation to skin and eyes in some individuals.

**Inhalation**

Not applicable

**Skin**

Temporary irritation may occur.

**Absorption**

Not applicable

**Ingestion**

This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

**Eyes**

Temporary irritation (itching) or redness may occur.

**Ears**

Temporary irritation (itching) or redness may occur.

**Primary Routes of Entry (Exposure)**

Skin and eyes.

**Target Organs**

Skin and eyes.

**Medical Conditions Aggravated by Exposure**

None identified.

**Section 4 - First Aid Measures**

**First Aid: Inhalation**

Not applicable

**First Aid: Skin**

Remove contaminated clothing. Wash exposed skin with soap and cold water. Launder contaminated clothing before reusing.

**First Aid: Ingestion**

This product is not intended to be ingested or eaten. If this product is ingested, do not induce vomiting. Drink plenty of water. Contact a physician immediately.

**First Aid: Eyes**

Flush eyes with large amounts of water for 5-20 minutes. Contact a medical professional.

**First Aid: Ears**

Wash exposed skin with soap and water. If irritation develops in the inner ear, seek medical attention.

**First Aid: Notes to Physician**

Treat symptomatically. Emesis may be indicated in recent (within 30 minutes) ingestion of large quantities.

**Section 5 - Fire Fighting Measures**

**Flash Point:** Not applicable

**Upper Flammable Limit (UFL):** Not applicable

**Auto Ignition:** Not determined

**Rate of Burning:** Not determined

**General Fire Hazards**

There is no potential for spontaneous fire or explosion.

**Hazardous Combustion Products**

Carbon monoxide, carbon dioxide, aliphatic hydrocarbons, hydrocarbon oxidation products including aldehydes and alcohols, nitrogen oxidation products, hydrogen fluoride, hydrogen cyanide, and sulfur oxides.

**Extinguishing Media**

Use any media suitable for the surrounding fires.

**Fire Fighting Equipment/Instructions**

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

**Method Used:** Not applicable

**Lower Flammable Limit (LFL):** Not applicable

**Flammability Classification:** Not determined

**Section 6 - Accidental Release Measures**

**Containment Procedures**

No additional information available.

**Clean-Up Procedures**

Dispose of spilled material in approved landfill or incinerate in compliance with federal, state and local regulations. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the Environmental Protection Agency (EPA).

**Section 7 - Handling and Storage**

**Handling Procedures**

Use protective equipment as described in Section 8 of this material safety data sheet when handling uncontained material.

**Storage Procedures**

Warehouse storage should be in accordance with package directions, if any. Material should be kept dry, and protected from moisture. Store at temperatures between 4°-35°C/40°-95°F. Keep away from excess heat. Do not freeze.

## Section 8 - Exposure Controls / Personal Protection

**Exposure Guidelines****A: General Product Information**

No information available for the product.

**B: Component Exposure Limits****Calcium carbonate (1317-65-3)**OSHA: 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)**Graphite (7782-42-5)**ACGIH: 2 mg/m<sup>3</sup> TWA (respirable fraction, all forms except graphite fibers)OSHA: 2.5 mg/m<sup>3</sup> TWA (respirable dust)**Titanium dioxide (13463-67-7)**ACGIH: 10 mg/m<sup>3</sup> TWAOSHA: 10 mg/m<sup>3</sup> TWA (total dust)**Iron oxide (1309-37-1)**ACGIH: 5 mg/m<sup>3</sup> TWA (dust and fume, as Fe)OSHA: 10 mg/m<sup>3</sup> TWA (fume)**PERSONAL PROTECTIVE EQUIPMENT****Personal Protective Equipment: Eyes/Face**

Safety glasses with sideshields, chemical goggles, or face mask recommended.

**Personal Protective Equipment: Ears**

Ear protection (earplugs, hood, or earmuffs) may be used in extreme exposures.

**Personal Protective Equipment: Skin**

Any chemical impervious glove may be used to protect skin.

**Personal Protective Equipment: Respiratory**

Not applicable

**Ventilation**

Not applicable

**Personal Protective Equipment: General**

Impervious apron or coveralls can be used to protect clothing.

## Section 9 - Physical & Chemical Properties

**Appearance:** CI (Caulk): Red. SI (Spray): Light blue.**Physical State:** semi-solid**Vapor Pressure:** Not determined**Boiling Point:** Not applicable**Solubility (H<sub>2</sub>O):** Not determined**Solids Content** 75%-82%**Viscosity:** CI (Caulk) = 288,000-464,000

SI (Spray) = 24,000-48,000

**Percent Volatile:** Not determined**Odor:** No specific odor**pH:** 7-8.9**Vapor Density:** >1**Melting Point:** Not applicable**Specific Gravity:** CI (Caulk) = >1.37-1.47

SI (Spray) = 1.27-1.37 @25°C

**Evaporation Rate:** <1**Bulk Density:** 80-100 pcf**VOC:** CI (Caulk) = 37.1 g/L

SI (Spray) = 44.6 g/L

## Section 10 - Chemical Stability & Reactivity Information

**Chemical Stability**

This is a stable material. This product is not reactive.

**Hazardous Decomposition**

Dried films forced to burn will produce: Carbon monoxide, carbon dioxide, aliphatic hydrocarbons, hydrocarbon oxidation products including aldehydes and alcohols, nitrogen oxidation products, hydrogen fluoride, hydrogen cyanide, and sulfur oxides.

**Hazardous Polymerization**

Will not occur.

**Section 11 - Toxicological Information**

**Acute Toxicity**

**A: General Product Information**

Skin and eye irritation may occur after contact with product.

**B: Component Analysis - LD50/LC50**

**1,2-Propylene glycol (57-55-6)**

Oral LD50 Rat: 20 g/kg; Oral LD50 Mouse: 22 g/kg; Dermal LD50 Rabbit: 20800 mg/kg

**Carcinogenicity**

**A: General Product Information**

The Occupational Safety and Health Administration (OSHA), National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), and American Conference of Governmental Industrial Hygienists (ACGIH) have not classified this product as a carcinogen.

**B: Component Carcinogenicity**

**Titanium dioxide (13463-67-7)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 3 - Not Classifiable (IARC Monograph 47, 1989)

**Iron oxide (1309-37-1)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen (dust and fume, as Fe)

IARC: Group 3 - Not Classifiable (IARC Supplement 7, 1987; Monograph 1, 1972)

**Chronic Toxicity**

None identified.

**Section 12 - Ecological Information**

**Ecotoxicity**

**A: General Product Information**

No information available for the product.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity**

**1,2-Propylene glycol (57-55-6)**

24 Hr LC50 goldfish: >5000 mg/L; 48 Hr LC50 guppy: >10000 mg/L

30 min EC50 Photobacterium phosphoreum: 710 mg/L

48 Hr EC50 water flea: >10000 mg/L

**Section 13 - Disposal Considerations**

**US EPA Waste Number & Descriptions**

**A: General Product Information**

This product is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations.

**B: Component Waste Numbers**

No EPA Waste Numbers are applicable for this product's components.

**Disposal Instructions**

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**Section 14 - Transportation Information**

**Shipping Name:** This product is not classified as a hazardous material for transport.

**Section 15 - Regulatory Information**

**US Federal Regulations**

**A: General Product Information**

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

**B: Component Analysis**

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

**State Regulations**

**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

**B: Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Calcium carbonate	1317-65-3	No	No	Yes	Yes	No	Yes
Graphite	7782-42-5	Yes	No	Yes	Yes	No	Yes
1,2-Propylene glycol	57-55-6	No	No	No	Yes	No	Yes
Titanium dioxide	13463-67-7	No	No	Yes	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	No	Yes	Yes	Yes	Yes

**A: TSCA Status**

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

**B: Component Analysis - Inventory**

Component	CAS #	TSCA	DSL	EINECS
Calcium carbonate	1317-65-3	Yes	No	Yes
Water	7732-18-5	Yes	Yes	Yes
Graphite	7782-42-5	Yes	Yes	Yes
1,2-Propylene glycol	57-55-6	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes
Ferric oxide black	1317-61-9	Yes	Yes	Yes

**Component Analysis - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
1,2-Propylene glycol	57-55-6	1 % (English Item 1362, French Item 1454)

**Section 16 - Other Information**

**Other Information**

Prepared for:  
Johns Manville Insulation Group  
Fire Protection Systems  
P.O. Box 5108  
Denver, CO 80217-5108

Prepared by:  
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P.O. Box 625005  
Littleton, CO USA 80162-5005

As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given.

Date	MSDS #	Reason
08/01/00	2100-1.0000	New MSDS authoring system.
08/17/00	2100-2.0000	Trade Names: Added CE; changed Firetemp™ to Firetemp®. Sect. 2: Deleted aluminum oxide from composition.

**Material Name: Firetemp® Firestop**

**Material Safety Data  
Sheet ID: 2100**

05/23/02	2100-2.0000	Section 2: Discontinued & deleted Firetemp® TF; transferred CE and SE product names to new MSDS 2104. Revised composition for SI and CI. Updated Sect. 15 WHMIS: 1,2-propylene glycol not a controlled substance.
04/14/03	2100-2.0001	Minor edits.
06/22/04	2100-2.0002	Regulatory update. Minor edits throughout.
04/04/05	2100-2.0003	Sect. 9 VOC info edited.

This is the end of MSDS # 2100