

## FS-ONE High Performance Intumescent Firestop Sealant

### Product description

- Intumescent (expands when exposed to fire) firestop sealant that helps protect combustible and non-combustible penetrations for up to 4 hours fire rating

### Product features

- Smoke, gas and water resistant after material has cured
- Contains no halogen, solvents or asbestos
- High fire rating properties
- Water based, easy to clean
- Protects most typical firestop penetration applications
- Paintable
- Single component systems available
- Meets LEED™ requirements for indoor environmental quality credit 4.1 Low Emitting Materials, Sealants and Adhesives and 4.2 Paints and Coatings

### Areas of application

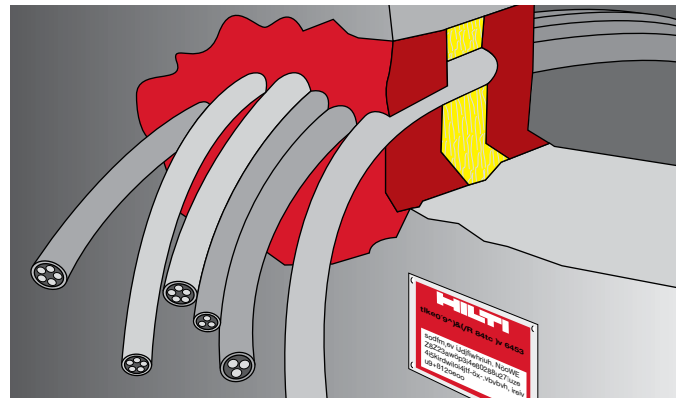
- Steel, copper and EMT pipes
- Insulated steel and copper pipes
- Cable bundles
- Closed or vented plastic pipes
- HVAC penetrations

### For use with

- Concrete, masonry, drywall and wood floor assemblies
- Wall and floor assemblies rated up to 4 hours

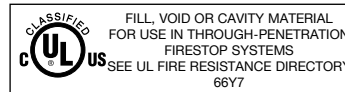
### Examples

- Sealing around combustible pipe penetrations in fire rated construction
- Sealing around non-combustible penetrations in fire rated construction



Technical Data*	FS-ONE
<b>Chemical basis</b>	Water-based intumescent acrylic dispersion
<b>Color</b>	Red
<b>Application temperature</b>	40°F to 104°F (5°C to 40°C)
<b>Skin forming time</b>	Approx. 20-30 min.
<b>Curing time</b>	Approx. 2 mm / 3 days
<b>Movement capability</b>	Approx. 5%
<b>Expansion rate (unrestricted)</b>	Up to 3-5 times original volume
<b>Temperature resistance (cured)</b>	-40°F to 212°F (-40°C to 100°C)
<b>Surface burning characteristics (ASTM E 84-96)</b>	Flame Spread: 0 Smoke Development: 5
<b>Sound transmission classification (ASTM E 90-99)</b>	56 (Relates to specific construction)
<b>Approvals</b>	<ul style="list-style-type: none"> <li>California State Fire Marshal - No. 4485-1200:108</li> <li>City of New York - MEA 326-96-M Vol. IV</li> </ul>
<b>Tested in accordance with</b>	<ul style="list-style-type: none"> <li>UL 1479</li> <li>ASTM E 814</li> <li>ASTM E 84</li> </ul>

\*At 73°F (23°C) and 50% relative humidity



## Installation instructions for FS-ONE

### Notice

- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.
- Instructions below are general guidelines — always refer to the applicable drawing in the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information

### Opening

- Clean the opening. Surfaces to which FS-ONE will be applied should be cleaned of loose debris, dirt, oil, moisture, frost and wax. Structures supporting penetrating items must be installed in compliance with local building and electrical standards.

### Application of firestop sealant

- Install the prescribed backfilling material type and depth to obtain the desired rating (if required). Leave sufficient depth for applying FS-ONE.
- Application of firestop sealant: Apply FS-ONE to the required depth in order to obtain the desired fire rating. Make sure FS-ONE contacts all surfaces to provide maximum adhesion. For application of FS-ONE use a standard caulking gun, foil pack gun, bulk loader and bulk gun. With FS-ONE buckets, Graco type sealant pumps may be used. (Contact pump manufacturer for proper selection).

- Smoothing of firestop sealant: To complete the seal, tool immediately to give a smooth appearance. Excess sealant, prior to curing, can be cleaned away from adjacent surfaces and tools with water.
- Leave completed seal undisturbed for 48 hours.
- For maintenance reasons, a penetration seal could be permanently marked with an identification plate. In such a case, mark the identification plate and fasten it in a visible position next to the seal.

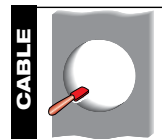
### Not for use

- High movement expansion joints
- Underwater

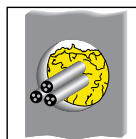
- On materials where oil, plasticizers or solvents may bleed i.e. impregnated wood, oil based seals, green or partially vulcanized rubber
- In any penetration other than those specifically described in this manual or the test reports

### Storage

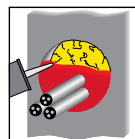
- Store only in the original packaging in a location protected from moisture at temperatures between 40°F (5°C) and 86°F (30°C)
- Observe expiration date on the package



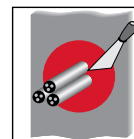
1. Clean opening.



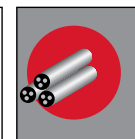
2. Pack mineral wool. (If required)



3. Apply FS-ONE.



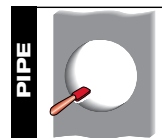
4. Smooth FS-ONE.



5. Leave completed seal undisturbed for 48 hours.



6. Fasten identification plate (if required).



1. Clean opening.



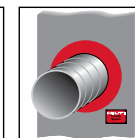
2. Pack mineral wool. (If required)



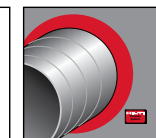
3. Apply FS-ONE.



4. Smooth FS-ONE.



5. Leave completed seal undisturbed for 48 hours.



6. Fasten identification plate (if required).

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MSDS No.: 259  
Revision No.: 010  
Revision Date: 08/17/04  
Page: 1 of 2

**Product name:** FS-ONE High Performance Intumescent Firestop Sealant  
**Description:** One-part acrylic-based sealant  
**Supplier:** Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121  
**Emergency # (Chem-Trec.):** 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

## INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	PEL:	TLV:	STEL:
Polyacrylate dispersion	Mixture	NE	NE	NE
Calcium carbonate	001317-65-3	5 mg/m <sup>3</sup> (T)	10 mg/m <sup>3</sup> (T)	NE
Zinc borate	138265-88-0	NE	NE	NE
Ammonium polyphosphate	068333-79-9	NE	NE	NE
Talc	014807-96-6	20 mppcf	2 mg/m <sup>3</sup>	NE
Expandable graphite	012777-87-6	5 mg/m <sup>3</sup> (T)	2 mg/m <sup>3</sup> (T)	NE
Ethylene glycol	000107-21-1	NE	C:100 mg/m <sup>3</sup> (A)	NE
Polybutene	009003-29-6	NE	NE	NE
Iron oxide	001309-37-1	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	NE
Glass filament	065997-17-3	NE	5 mg/m <sup>3</sup> (T)	NE
Silicon dioxide	014808-60-7	0.05 mg/m <sup>3</sup> (T)	0.1 mg/m <sup>3</sup> (T)	NE
Water	007732-18-5	NE	NE	NE

**Abbreviations:** PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. C = Ceiling. STEL = Short Term Exposure Limit. NE = None Established. NA = Not Applicable. (T) indicates "as total dust". (R) indicates "as respirable fraction". (A) indicates "as an aerosol". mppcf = million particles per cubic foot.

## PHYSICAL DATA

<b>Appearance:</b>	Red paste.	<b>Odor:</b>	Odorless.
<b>Vapor Density: (air = 1)</b>	Not determined.	<b>Vapor Pressure:</b>	23mbar @ 20C / 68F
<b>Boiling Point:</b>	Not applicable.	<b>VOC Content:</b>	75.0 g/L.
<b>Evaporation Rate:</b>	Not applicable.	<b>Solubility in Water:</b>	Soluble.
<b>Specific Gravity:</b>	1.5	<b>pH:</b>	Not determined.

## FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point:</b>	Non-flammable.	<b>Flammable Limits:</b>	Not applicable.
<b>Extinguishing Media:</b>	Not applicable. Use extinguishing media as appropriate for surrounding fire.		
<b>Special Fire Fighting Procedures:</b>	None known. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
<b>Unusual Fire and Explosion Hazards:</b>	None known. Thermal decomposition products can be formed such as oxides of carbon, sulfur and phosphorous.		

## REACTIVITY DATA

<b>Stability:</b>	Stable.	<b>Hazardous Polymerization:</b>	Will not occur.
<b>Incompatibility:</b>	Strong acids, peroxides, and oxidizing agents.		
<b>Decomposition Products:</b>	Thermal decomposition can yield CO and CO <sub>2</sub> .		
<b>Conditions to Avoid:</b>	None known.		

## HEALTH HAZARD DATA

<b>Known Hazards:</b>	None known.
<b>Signs and Symptoms of Exposure:</b>	Possibly irritating upon contact with the eyes or upon repeated contact with the skin.
<b>Medical Conditions</b>	Eye and skin conditions.
<b>Aggravated by Exposure:</b>	
<b>Routes of Exposure:</b>	Dermal.



**Hilti Firestop**  
Saving Lives  
through innovation  
and education

**Hilti. Outperform. Outlast.**

Hilti, Inc. (U.S.) 1-800-879-8000 • [www.us.hilti.com](http://www.us.hilti.com) • en español 1-800-879-5000 • Hilti (Canada) Corp. 1-800-363-4458 [www.hilti.ca](http://www.hilti.ca)

MSDS No.: 259  
Revision No.: 010  
Revision Date: 08/17/04  
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**Carcinogenicity:** IARC classifies crystalline silica (quartz sand) as Group I based upon evidence among workers in industries where there has been long-term and chronic exposure (via inhalation) to silica dust; e.g. mining, quarry, stone crushing, refractory brick and pottery workers. This product does not pose a dust hazard; therefore, this classification is not relevant. Based upon the nature and intended use of this product, it does not pose an increased cancer risk to workers.

## EMERGENCY AND FIRST AID PROCEDURES

**Eyes:** Immediately flush with plenty of water. Call a physician if symptoms occur.

**Skin:** Immediately wipe off material and wash with soap and water. Material can adhere to the skin. If material has adhered to the skin, use an abrasive containing hand cleaner. If material does not come off, buff with a pumice stone.

**Inhalation:** Move victim to fresh air if discomfort develops. Call a physician if symptoms persist.

**Ingestion:** Seek medical attention. Do not induce vomiting unless directed by a physician. If a large quantity was ingested, give 1 to 2 glasses of water to dilute. Never give anything by mouth to an unconscious person.

**Other:** Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

## CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

**Ventilation:** General (natural or mechanically induced fresh air movements).

**Eye Protection:** Not required, however, safety glasses should be worn in most industrial settings.

**Skin Protection:** Avoid skin contact. Cloth gloves are suitable for hand protection.

**Respiratory Protection:** None normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air-supplied respirator.

## PRECAUTIONS FOR SAFE HANDLING AND USE

**Handling and Storing Precautions:** Store in a cool, dry area preferably between 40o and 77o F. Keep from freezing. Do not store in direct sunlight. Avoid contact with the eyes or skin. Practice good hygiene; i.e. always wash thoroughly after handling and before eating or smoking. For industrial use only. Keep out of reach of children. Follow label/use instructions.

**Spill Procedures:** Immediately wipe away spilled material before it hardens. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements.

## REGULATORY INFORMATION

**Hazard Communication:** This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**HMIS Codes:** Health 1, Flammability 0, Reactivity 0, PPE B

**DOT Shipping Name:** Not regulated.

**IATA / ICAO Shipping Name:** Not regulated.

**TSCA Inventory Status:** Chemical components listed on TSCA inventory. SARA Title III, Section 313: This product contains < 3% ethylene glycol (CAS 107-21-1) and < 15% zinc borate (re: zinc compounds) which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).

**EPA Waste Code(s):** Not regulated by EPA as a hazardous waste.

**Waste Disposal Methods:** Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

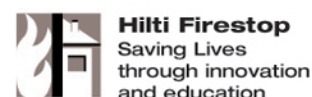
## CONTACTS

**Customer Service:** 1 800 879 8000      **Technical Service:** 1 800 879 8000

**Health / Safety:** 1 800 879 6000 Jerry Metcalf (x6704)

**Emergency # (Chem-Trec):** 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.



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# Certificate of Compliance

Certificate Number 20100512-R13240

Report Reference 2010 May 12

Issue Date 2010 May 12

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**Underwriters  
Laboratories Inc.®**

**Issued to:** Hilti, Inc.

54 S 122ND East AVE  
Tulsa, OK 74146 USA

*This is to certify that  
representative samples of*

**Fill, Void or Cavity Materials  
FS-ONE**

*Have been investigated by Underwriters Laboratories Inc.® (UL) or any authorized  
licensee of UL in accordance with the Standard(s) indicated on this Certificate.*


**Standard(s) for Safety:**

ANSI/UL 1479, ANSI/UL 2079, CAN/ULC-S115-05  
Third Edition, revised March 1, 2010

**Additional Information:**

FS-ONE Sealant for use in Joint Systems and FS-ONE for use in  
Through-Penetration Firestop Systems as currently described in the UL Fire  
Resistance Directory.

**Only those products bearing the UL Classification Mark should be considered as being covered by UL's Classification and Follow-Up Service.**

The UL Classification Mark includes: UL in a circle symbol:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and, the product category name (product identity) as indicated in the appropriate UL Directory.

**Look for the UL Classification Mark on the product**

Issued by:

*Mona Couloute*  
Mona Couloute

Underwriters Laboratories Inc.

Reviewed by:

*Chris J. Johnson*  
Chris J. Johnson

Underwriters Laboratories Inc.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.



# Certificate of Compliance

Certificate Number **20060214-R13240E**

Report Reference **2006 February 14**

Issue Date **2006 February 14**

Page 1 of 1



*Issued to:* **Hilti, Inc.**  
5400 S 122ND East Ave  
Tulsa, OK 74146 USA


*This is to certify that  
representative samples of* **Fill, Void or Cavity Materials**  
**FS-ONE**

*Have been investigated by Underwriters Laboratories Inc.® in  
accordance with the Standard(s) indicated on this Certificate.*


*Standard(s) for Safety:* **ANSI/UL 1479, ANSI/UL 2079, CAN/ULC-S115-05**


*Additional Information:* **FS-ONE Sealant for use in Joint Systems and FS-ONE for use in Through-Penetration Firestop Systems as currently described in the UL Fire Resistance Directory.**

**Only those products bearing the UL Classification Mark should be considered as being covered by UL's Classification and Follow-Up Service.**

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**Look for the UL Classification Mark on the product**

Issued by:  
  
Mona Couloute  
Underwriters Laboratories Inc.

Reviewed by:   
Christopher Johnson  
Underwriters Laboratories Inc.



Hilti North America  
5400 South 122nd East Avenue  
Tulsa, OK 74146

P.O. Box 21148 | Tulsa, OK 74121-1148  
T 1-800-879-8000 | F 918-252-6742  
[www.hilti.com](http://www.hilti.com)

June 27, 2008

To Whom It May Concern:

Re: Hilti FS-ONE Intumescent Firestop

The Hilti FS-ONE Intumescent Firestop is manufactured in Kaufering, Germany.

The FS-ONE pail is made of polyethylene and can be completely recycled. There is no post-consumer or post-industrial content in FS-ONE and it cannot be recycled. The VOC content for FS-ONE is 75 grams/liter.

FS-ONE is not regulated as a hazardous waste by the Federal EPA Standards. The regulations for the disposal of non-regulated industrial waste can vary from state to state and even city to city. For this reason, you should consult your local and state regulatory agencies for direction on disposal.

Please feel free to contact me at (918) 252-6704 if you have questions.

Sincerely,

Jerry Metcalf MPH, CHMM  
Safety/Environmental Manager  
Hilti Inc  
(918) 252 6704  
[jerry.metcalf@hilti.com](mailto:jerry.metcalf@hilti.com)

## NOTES / DEFINITIONS:

1. **Post-Consumer Recycled Content:** Portion of material or product derived from discarded consumer waste that has been recovered for use as a raw material [e.g., plastic bottles, newspaper]
2. **Post-Industrial Recycled Content:** Portion of material or product derived from recovered industrial and mfg. materials that are diverted from municipal solid waste for use in a *different* mfg. process, prior to use by a consumer [e.g., fly-ash in concrete or synthetic gypsum board, both of which are by-products of coal-burning power plants]. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product do not qualify.
3. **Manufactured:** Final assembly of components into building product that is furnished and installed by trades [e.g., if the hardware comes from Dallas, TX, the lumber from Keene, NH, and the joist is assembled in Kent, WA; then the location of final assembly is Kent, WA]. [www.gpsvisualizer.com/calculators](http://www.gpsvisualizer.com/calculators) can be used to calculate straight-line distance between project site / New York, NY and location of manufacture and raw material source. Note: location noted on material data sheets is often *corporate* location; need manufacturer to verify actual *manufacture* location.
4. **Raw Materials:** Virgin or recovered resources from which the product's components are made [i.e., before processing or manufacturing].
5. **Rapidly Renewable:** Materials and products made from raw materials that are harvested within a 10-year cycle [e.g., bamboo, cork, linoleum, fast-growing poplar, wheatboard, wool carpet].
6. **FSC Certified:** Wood-based products that are certified by the Forest Stewardship Council and carry a Chain-of-Custody certificate number from the vendor or manufacturer.
7. **VOC Content:** The quantity of volatile organic compounds contained in products such as adhesives, sealants and architectural coatings. VOC content is to be reported in grams/liter or lbs/gallon, less water and any exempt compounds/solvents.

## CONTRACTOR CERTIFICATION:

I, \_\_\_\_\_ a duly authorized representative of \_\_\_\_\_ hereby certify that the information contained herein accurately represents the listed "green building" characteristics of the materials to be provided by our company as components of the building construction. Furthermore, I understand that any change in such "green building" material characteristics during the purchasing and/or installation period will require prior written approval from the Construction Manager and Owner. \_\_\_\_\_

SIGNATURE OF AUTHORIZED REPRESENTATIVE: \_\_\_\_\_ DATE: \_\_\_\_\_ p. \_\_\_\_ of \_\_\_\_



MSDS No.: 259  
Revision No.: 010  
Revision Date: 08/17/04  
Page: 1 of 2

## MATERIAL SAFETY DATA SHEET

**Product name:** FS-ONE High Performance Intumescent Firestop Sealant  
**Description:** One-part acrylic-based sealant  
**Supplier:** Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121  
**Emergency # (Chem-Trec.):** 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

## INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	PEL:	TLV:	STEL:
Polyacrylate dispersion	Mixture	NE	NE	NE
Calcium carbonate	001317-65-3	5 mg/m <sup>3</sup> (T)	10 mg/m <sup>3</sup> (T)	NE
Zinc borate	138265-88-0	NE	NE	NE
Ammonium polyphosphate	068333-79-9	NE	NE	NE
Talc	014807-96-6	20 mppcf	2 mg/m <sup>3</sup>	NE
Expandable graphite	012777-87-6	5 mg/m <sup>3</sup> (T)	2 mg/m <sup>3</sup> (T)	NE
Ethylene glycol	000107-21-1	NE	C:100 mg/m <sup>3</sup> (A)	NE
Polybutene	009003-29-6	NE	NE	NE
Iron oxide	001309-37-1	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	NE
Glass filament	065997-17-3	NE	5 mg/m <sup>3</sup> (T)	NE
Silicon dioxide	014808-60-7	0.05 mg/m <sup>3</sup> (T)	0.1 mg/m <sup>3</sup> (T)	NE
Water	007732-18-5	NE	NE	NE

**Abbreviations:** PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value. C = Ceiling. STEL = Short Term Exposure Limit. NE = None Established. NA = Not Applicable. (T) indicates "as total dust". (R) indicates "as respirable fraction". (A) indicates "as an aerosol". mppcf = million particles per cubic foot.

## PHYSICAL DATA

<b>Appearance:</b>	Red paste.	<b>Odor:</b>	Odorless.
<b>Vapor Density: (air = 1)</b>	Not determined.	<b>Vapor Pressure:</b>	23mbar @ 20C / 68F
<b>Boiling Point:</b>	Not applicable.	<b>VOC Content:</b>	75.0 g/L.
<b>Evaporation Rate:</b>	Not applicable.	<b>Solubility in Water:</b>	Soluble.
<b>Specific Gravity:</b>	1.5	<b>pH:</b>	Not determined.

## FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point:</b>	Non-flammable.	<b>Flammable Limits:</b>	Not applicable.
<b>Extinguishing Media:</b>	Not applicable. Use extinguishing media as appropriate for surrounding fire.		
<b>Special Fire Fighting Procedures:</b>	None known. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
<b>Unusual Fire and Explosion Hazards:</b>	None known. Thermal decomposition products can be formed such as oxides of carbon, sulfur and phosphorous.		

## REACTIVITY DATA

<b>Stability:</b>	Stable.	<b>Hazardous Polymerization:</b>	Will not occur.
<b>Incompatibility:</b>	Strong acids, peroxides, and oxidizing agents.		
<b>Decomposition Products:</b>	Thermal decomposition can yield CO and CO <sub>2</sub> .		
<b>Conditions to Avoid:</b>	None known.		

## HEALTH HAZARD DATA

<b>Known Hazards:</b>	None known.
<b>Signs and Symptoms of Exposure:</b>	Possibly irritating upon contact with the eyes or upon repeated contact with the skin.
<b>Medical Conditions Aggravated by Exposure:</b>	Eye and skin conditions.
<b>Routes of Exposure:</b>	Dermal.



<b>Carcinogenicity:</b>	IARC classifies crystalline silica (quartz sand) as Group I based upon evidence among workers in industries where there has been long-term and chronic exposure (via inhalation) to silica dust; e.g. mining, quarry, stone crushing, refractory brick and pottery workers. This product does not pose a dust hazard; therefore, this classification is not relevant. Based upon the nature and intended use of this product, it does not pose an increased cancer risk to workers.
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#### EMERGENCY AND FIRST AID PROCEDURES

<b>Eyes:</b>	Immediately flush with plenty of water. Call a physician if symptoms occur.
<b>Skin:</b>	Immediately wipe off material and wash with soap and water. Material can adhere to the skin. If material has adhered to the skin, use an abrasive containing hand cleaner. If material does not come off, buff with a pumice stone.
<b>Inhalation:</b>	Move victim to fresh air if discomfort develops. Call a physician if symptoms persist.
<b>Ingestion:</b>	Seek medical attention. Do not induce vomiting unless directed by a physician. If a large quantity was ingested, give 1 to 2 glasses of water to dilute. <u>Never</u> give anything by mouth to an unconscious person.
<b>Other:</b>	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

#### CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

<b>Ventilation:</b>	General (natural or mechanically induced fresh air movements).
<b>Eye Protection:</b>	Not required, however, safety glasses should be worn in most industrial settings.
<b>Skin Protection:</b>	Avoid skin contact. Cloth gloves are suitable for hand protection.
<b>Respiratory Protection:</b>	None normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air-supplied respirator.

#### PRECAUTIONS FOR SAFE HANDLING AND USE

<b>Handling and Storing Precautions:</b>	Store in a cool, dry area preferably between 40° and 77° F. Keep from freezing. Do not store in direct sunlight. Avoid contact with the eyes or skin. Practice good hygiene; i.e. always wash thoroughly after handling and before eating or smoking. For industrial use only. Keep out of reach of children. Follow label/use instructions.
<b>Spill Procedures:</b>	Immediately wipe away spilled material before it hardens. Place in a container for proper disposal in accordance with all applicable local, state, or federal requirements.

#### REGULATORY INFORMATION

<b>Hazard Communication:</b>	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
<b>HMIS Codes:</b>	Health 1, Flammability 0, Reactivity 0, PPE B
<b>DOT Shipping Name:</b>	Not regulated.
<b>IATA / ICAO Shipping Name:</b>	Not regulated.
<b>TSCA Inventory Status:</b>	Chemical components listed on TSCA inventory.
<b>SARA Title III, Section 313:</b>	This product contains < 3% ethylene glycol (CAS 107-21-1) and < 15% zinc borate (re: zinc compounds) which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
<b>EPA Waste Code(s):</b>	Not regulated by EPA as a hazardous waste.
<b>Waste Disposal Methods:</b>	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

#### CONTACTS

<b>Customer Service:</b>	1 800 879 8000	<b>Technical Service:</b>	1 800 879 8000
<b>Health / Safety:</b>	1 800 879 6000	Jerry Metcalf	(x6704)
<b>Emergency # (Chem-Trec):</b>	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION  
OFFICE OF THE STATE FIRE MARSHAL  
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM  
**LISTING SERVICE**



**LISTING No.** 4485-1200:108

Page 1 of 1

**CATEGORY:** Opening Protection (Firestopping)

**LISTEE:** Hilti, Inc., 5400 S. 122nd East Ave, Tulsa, OK 74146  
Contact: \*Clay Hensley (918) 252-6216 Fax (918) 254-1679

**DESIGN:** Model FS-ONE Firestop Sealant. Refer to listee's printed data sheet and UL Fire Resistance Directory for additional detailed product description and operational considerations.

**INSTALLATION:** In accordance with listee's printed installation instructions, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

**MARKING:** Listee's name, type identification and UL label.

**APPROVAL:** Listed as firestop devices for use in through-penetration firestop system up to 3 hour rating. For indoor use only.

Approved under Through-Penetration Fire Stop Systems: CAJ1155, CAJ2091, CAJ2118, CAJ3095, CAJ5044, CAJ8041, F-C-2025, WL1085, WL1056, WL3047, WL5029, WL8004. Refer to UL Fire Resistance Directory for detailed constructions.

\*Rev. 06-20-2006



This listing is based upon technical data submitted by the applicant. CSFM Fire Engineering staff has reviewed the test results and/or other data but does not make an independent verification of any claims. This listing is not an endorsement or recommendation of the item listed. This listing should not be used to verify correct operational requirements or installation criteria. Refer to listee's data sheet, installation instructions and/or other suitable information sources.

Date Issued:

**JUNE 10, 2008**

*Listing Expires **June 30, 2009***

Authorized By:

**BEN HO**, Chief  
Fire Engineering Division



NYC Department of Buildings  
280 Broadway, New York, NY 10007  
Patricia Lancaster, FAIA, Commissioner  
(212) 566-5000, TTY: (212) 566-4769

## Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

### MEA 326-96-M Vol. 5

**Manufacturer:** Hilti, Inc., 5400 S. 122 East Avenue, Tulsa, OK 74146

**Trade Name(s):** Hilti, Inc.

**Product:** Fill, void or cavity material for fire protection

**Pertinent Code Section(s):** 27-345

**Prescribed Test(s):** RS 5-19 (ASTM E814), UL 2079

**Laboratory:** Underwriters Laboratories, Inc.

**Test Report(s):** File R13240, dated July 16, 1993, July 21, 1993, July 13, 1993, July 22, 1993, April 1, 1993, March 25, 1994, March 3 and 6, 1995, September 4, 1996, September 27, 1997;  
File R13644, dated April 12, 1993 and May 3, 1993;  
File R12232, dated August 2, 1993; UL-design listings.

**Description:** Fill, void or cavity material for through-penetrations in fire-rated wall and/or floor/ceiling construction. The Hilti FS-ONE Firestop Sealant shall be applied in accordance with Underwriters Laboratories Inc. system numbers, listed on following pages, in achieving the required fire-resistance ratings.