Heat and Frost Insulators

MSDS

Insulators apply insulation materials to plumbing, air-handling, heating, cooling and refrigeration systems, piping equipment and pressure vessels, and walls, floors and ceilings of buildings and other structures, to prevent or reduce the passage of heat, cold, sound or fire. They are employed by construction companies and insulation contractors, or they may be self-employed. To learn more about this occupation, click here.

NOC 7293 – Heat and Frost Insulators

Product Details Sheet

Material Safety Data Sheet

Essential Skills Focus

	1	2	3
Document Use	□	■	□
Writing	□	■	□
Decision Making	□	■	□

1. Tasks

Heat and Frost Insulators use products to prevent fire from spreading through floors of buildings. They read Material Safety Data Sheets (MSDS) for hazardous products.

Task 1

New products are constantly available. Insulators check product details to make sure that the product is well suited to how it will be used. Refer to the Product Details Sheet to decide if this product could be used in the situation below.

> *The insulator is replacing the insulation between floors in a hotel renovation. The pipes between the floors are 200 mm in diameter and there is enough space for a caulking gun. Although it is winter, the building has some heat during the repairs and the daytime temperature is 11˚C.*

Instructions: Decide if the product is suitable for this situation. Explain why or why not.

Decision Making

For Tasks 2 and 3, Refer to the MSDS sheet. (PDF – 266C)

Task 2

The insulator checks the MSDS for this product. Highlight the section on Handling procedures.

Document Use

Task 3

What personal protective equipment does the Insulator need to handle this product?

Document Use

Task 4

The MSDS seems to present different information about the health problems that could occur if the worker uses this product regularly over a long period of time. The insulator writes an e-mail to the company to ask for clarification.

Instructions: Write an e-mail asking for information about the long-term health hazards. Include the product name, number, frequency of use, and identify conflicting information in the MSDS. Use the e-mail template on page 6.

Writing

CP 601S ELASTOMERIC FIRESTOP 310ML TUBE: Item No.: 00314268

Product Details

Product Description	CP 601S is a silicone based firestop sealant that provides movement in fire-related joint applications and pipe penetration.
Packaging	Tube
Examples	Where a concrete floor assembly meets up with an exterior wall (concrete, glass, etc.) Joints in walls or fire compartments Sealing floor to floor joints to impede the passage of fire, smoke and toxic fumes
Intumescent	Yes
Application Temperature/ Substrate	5 - 25 °C / 40 - 77 °F
Movement Capability	25%
Pipe diameter - Metal, Noncombustable Pipe	Up to 254 mm
Shelf Life	12 months
Shore A Hardness	25 °
Skin Forming Time	15 minutes
Storage Requirements	Store only in the original packaging in a location protected from moisture at a temperature of 40°F (5°C) to 77°F (25°C). Observe expiration date on packaging.
Tack Free Cure	15
Approvals/Listings	UL Classified UL 2079 UL 1479 Factory Mutual (FM) Approved City of New York MEA 101-99-M
Method of Application	Caulking
Applications	Joints in walls, floor to floor or fire compartments
Volume	18 in^3
Paintable	No
Package Quantity	1
Package Contents	CP 601S 310 ml tube
Ordering Name	CP 601S ELASTOMERIC FIRESTOP 310ML TUBE
Color	Red
Base Materials	DEF: Masonry, Concrete, Metal, Drywall, Glass

Hilti (Canada) Corporation

MSDS No.: 266C
Revision No.: 004
Revision Date: 17 Aug., 2004
Page: 1 of 2

MATERIAL SAFETY DATA SHEET

Product identifier: **CP 601S Elastomeric Firestop Sealant**
Product use: Fire resistant silicone based sealant for use in fire rated joint applications
Supplier: Hilti (Canada) Corporation, 6790 Century Avenue, Suite #300, Mississauga, Ontario L5N 2V8
Originator: Hilti, Inc., P. O. Box 21148, Tulsa, Oklahoma, USA 74121
Emergency number: **Chem-Trec: 1 800 424 9300**

INGREDIENTS INFORMATION

Ingredient	CAS Number	% (wt.)	LC_{50}, (rat)	LD_{50} (rat)	TLV	STEL
Calcium carbonate	000471-34-1	45 - 55	N/Av	N/Av	N/A	N/E
Polydimethylsiloxanes	068037-58-1	25 - 35	N/Av	N/Av	N/E	N/E
Siloxanes and silicones, di-Me	063148-62-9	20 - 40	N/Av	> 24,000 mg/kg	N/E	N/E
Fumed silica	112945-52-5	03 - 09	N/Av	N/Av	N/A	N/E
Methyltrimethoxysilane	001185-55-3	01 - 05	N/Av	N/Av	N/E	N/E
Hydrogenated castor oil	008001-78-3	< 1	N/Av	> 10,000 mg/kg	N/E	N/E

PHYSICAL PROPERTIES

Appearance / Physical state:	Red paste.	**Odour:**	Negligible odour.
Specific gravity (at 20°C):	1.3 – 1.4	**VOC Content:**	3.0 g/L
Vapour pressure (at 20°C):	23 mbar	**Vapour density:**	Not applicable.
Evaporation rate:	Not determined.	**Boiling point:**	Not determined.
Freezing point:	Not determined.	**pH:**	Not determined.
Coefficient of H_20 / oil distrib:	Not determined.	**Solubility in water:**	Negligible.

FIRE AND EXPLOSION DATA

Flash point / Method:	Nonflammable.	**Flammable limits:**	Not applicable.
Conditions of flammability:	> 300° F / 150° C	**Auto-ignition temperature:**	Not applicable.
Means of extinction:	As appropriate for surrounding fire (e.g. Water, CO_2, Dry Chemical, Foam).		
Special fire fighting procedures:	None known. A NIOSH-approved self-contained breathing apparatus (SCBA) should be worn when fighting fires involving chemicals.		
Hazardous combustion products:	None known. Thermal decomposition products such as oxides of carbon, carbon fluoride and formaldehyde may be evolved at temperatures >150C/300F. The chemical nature and quantity of decomposition byproducts will vary widely depending on the conditions of combustion.		
Sensitivity to mechanical impact / static discharge:	Not susceptible to mechanical impact or to a static discharge.		

REACTIVITY DATA

Stability:	Stable.	**Conditions of reactivity:**	None known.
Incompatible materials:	Strong acids, peroxides and amines.		
Hazardous decomposition products:	Thermal decomposition can yield oxides of carbon, carbon fluoride and formaldehyde may be evolved at temperatures >150C/300F.		

TOXICOLOGICAL PROPERTIES

Routes of exposure:	☒ Skin contact ☐ Skin absorption ☒ Eye contact ☐ Inhalation ☐ Ingestion
Exposure limits:	See "Ingredients" section above.
Acute effects of exposure:	**Eyes:** Can cause irritation but injury is unlikely. **Skin:** No effects expected. Irritation is possible with some individuals. **Inhalation:** No effects expected. **Ingestion:** Not considered a route of exposure. Effects of ingestion have not been determined. Considered to have a low acute oral toxicity.
Chronic effects of exposure:	None known.
Synergistic materials:	None known.

FIRST AID MEASURES	
Eyes:	Flush with plenty of water. Call a physician if symptoms occur.
Skin:	Wash with soap and water. Seek medical attention if any effects persist.
Inhalation:	No ill effects expected. Should discomfort occur, move to fresh air.
Ingestion:	Do not induce vomiting unless large amounts are ingested. If conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Contact a physician immediately.
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	
Engineering controls:	General (natural or mechanically induced fresh air movements).
Eye protection:	As appropriate for the work area or work being done.
Skin protection:	Cloth gloves are suitable.
Respiratory protection:	None normally required.
Other:	No additional measures are normally required.

PRECAUTIONS FOR SAFE HANDLING AND USE	
Handling procedures and equipment:	For industrial use only. Keep out of reach of children. Use with adequate ventilation. Keep container closed when not in use. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e., wash after using and before eating or smoking.
Storage requirements:	Store in a cool dry area. Keep from freezing. Store between 5º and 25º C.
Spill, leak or release:	Immediately wipe away spilled material before it hardens. Place in a container for proper disposal.
Waste disposal:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, provincial, and federal safety, health and environmental regulations.
Special shipping instructions:	Avoid temperature extremes. Keep from freezing.

REGULATORY INFORMATION	
WHMIS classification:	D2B
HMIS codes:	Health 1, Flammability 1, Reactivity 0, PPE A
TDG shipping name:	Not regulated.

PREPARATION INFORMATION / CONTACTS			
Prepared by:	Hilti, Inc., Tulsa, OK USA	**Emergency phone number:**	1 800 424 9300
Customer Service:	Hilti (Canada) Corporation, Mississauga, Ontario; 1 800 363 4458		
Health / Safety contacts:	Hilti, Inc., Tulsa, OK USA; 1 800 879 6000, Jerry Metcalf (x6704)		
Abbreviations used:	**N/E** = None Established. **N/A** = Not Applicable. **N/Av** = Not Available. **HMIS:** Hazardous Materials Identification System		

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.

April 3, 2007 1:15:35 PM

Subject: MSDS 266C

To: info@msds.com

2. Answer Key

Essential Skills Focus

Task 1

New products are constantly available. Insulators check product details to make sure that the product is well suited to how it will be used. Refer to the Product Details Sheet to decide if this product could be used in the situation below.

> *The insulator is replacing the insulation between floors in a hotel renovation. The pipes between the floors are 200 mm in diameter and there is enough space for a caulking gun. Although it is winter, the building has some heat during the repairs and the daytime temperature is 11˚C.*

Instructions: Decide if the product is suitable for this situation. Explain why or why not.

Answer

This product can be used in this situation.

*Check **page 9** for one way to get this answer.*

Decision Making ②

Document Use ①

Finding Information ①

Task 2

The insulator checks the MSDS for this product. Highlight the section on Handling procedures.

Answer

section: PRECAUTIONS FOR SAFE HANDLING AND USE

*Check **page 11** for one way to get this answer.*

Document Use ②

Finding Information ①

Essential Skills Focus

Task 3

What personal protective equipment does the Insulator need to handle this product?

Answer

Cloth gloves and eye protection depending on the work area or work being done.

*Check **page 12** for one way to get this answer.*

Document Use ②

Finding Information ①

Task 4

The MSDS seems to present different information about the health problems that could occur if the worker uses this product regularly over a long period of time. The insulator writes an e-mail to the company to ask for clarification.

Instructions: Write an e-mail asking for information about the long-term health hazards. Include the product name, number, frequency of use, and identify conflicting information in the MSDS. Use the e-mail template on page 6.

Answer

Answers may vary.

Sample answer: See Task 4 Answer Sheet

*Check **page 13** for one way to get this answer.*

Writing ②

Reading Text ②

Computer Use ②

3. Answer Steps

Task 1

New products are constantly available. Insulators check product details to make sure that the product is well suited to how it will be used. Refer to the Product Details Sheet to decide if this product could be used in the situation below.

> *The insulator is replacing the insulation between floors in a hotel renovation. The pipes between the floors are 200 mm in diameter and there is enough space for a caulking gun. Although it is winter, the building has some heat during the repairs and the daytime temperature is 11˚C.*

Instructions: Decide if the product is suitable for this situation. Explain why or why not.

Answer

This product can be used in this situation.

One way to get this answer...

1. Identify criteria from the task about the situation.
- Between floors
- Pipes – 200 mm
- Space for caulking gun
- Winter
- Daytime temperature 11˚C

2. List criteria in situation and similar information from the Product Details Sheet.

Situation	Product Requirements
Between floors to floor or fire compartments	Applications: Joints in walls, floor
Pipes – 200 mm	Pipe diameter: Up to 254 mm
Space for caulking gun	Method of application: caulking
Winter	
Daytime temperature 11˚C	Application Temperature: 5 – 25˚C

3. Decide that winter is not a criterion for using this product.
4. Compare each criteria or item in the list.
    - ***Between the floors*** is similar in meaning to ***floor to floor***
    - ***200 mm*** is less than ***254 mm***
    - Space for caulking gun means that the product can be applied
    - ***11˚C*** is more than ***5˚C*** but less than ***25˚C***
5. Decide that this product is suitable for this situation for the following reasons:
    - ***Between the floors*** is similar in meaning to ***floor to floor***
    - ***200 mm diameter*** is less than ***254 mm***
    - Space for caulking gun means that the product can be applied
    - ***11˚C*** is more than ***5˚C*** but less than ***25˚C***

Skill Focus

Decision Making ②

Additional Skills: Document Use ①, Finding Information ①

Task 2

The insulator checks the MSDS for this product. Highlight the section on Handling procedures.

Answer

section: PRECAUTIONS FOR SAFE HANDLING AND USE

One way to get this answer...

1. Scan the headings using the key words ***handling procedures***.
2. Locate the heading ***PRECAUTIONS FOR SAFE HANDLING AND USE***.
3. Decide that this section is about handling procedures.
4. Highlight the section ***Handling procedures and equipment: For industrial use …or smoking***.

Skill Focus

Document Use ②

Additional Skills: Finding Information ①

Task 3

What personal protective equipment does the Insulator need to handle this product?

Answer

Cloth gloves and eye protection depending on the work area or work being done.

One way to get this answer...

1. Scan the headings using the key words ***personal protective, equipment*** and ***handle***.
2. Locate the heading ***CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT***.
3. Decide that ***PPE*** is an abbreviation for ***Personal Protective Equipment***.
4. Scan this section using the keyword ***equipment***.
5. Locate ***eye protection*** and ***as appropriate for the work area or work being done***.
6. Decide that eye protection may be needed to handle this product depending on the work area or work being done.
7. Locate ***skin protection*** and ***cloth gloves are suitable***.
8. Decide that skin protection equipment is cloth gloves and that they are needed to handle this product.
9. Decide that eye protection may be needed depending on the work area or work being done.

Skill Focus

Document Use ②

Additional Skills: Finding Information ①

Task 4

The MSDS seems to present different information about the health problems that could occur if the worker uses this product regularly over a long period of time. The insulator writes an e-mail to the company to ask for clarification.

Instructions: Write an e-mail asking for information about the long-term health hazards. Include the product name, number, frequency of use, and identify conflicting information in the MSDS.

Answer

Answers may vary.

Sample answer: See Task 4 Answer Sheet.

One way to get this answer...

1. Identify the purpose for writing: to request information to clarify long term health problems.
2. Locate the audience: someone (Sir or Madame) at MSDS.
3. Recognize that e-mails have a salutation, one or more paragraphs of writing, and closure.
4. Write the salutation. State the product name, number, frequency of use.

   Dear Sir or Madame

   I am a worker using your product CP 601S. Because I use this product every day I am interested in finding out more about the health problems that might occur from long-term exposure.

5. Explain the conflicting information in sentences.

   Under Toxicological properties it says that no effects are expected from chronic exposure. In the handling section it says "avoid prolonged or repeated contact with the skin and cloth gloves are recommended". I'm not completely familiar with HMIS codes but the Health rating is 1 not 0 so some hazard is involved.

6. Write the conclusion and ask for clarification.

   I would appreciate clarification of the risk of this product to the skin or any other risk I should be aware of at your earliest convenience. Thanks.

Skill Focus

Writing ②

Additional Skills: Reading Text ②, Computer Use ②

FIRST AID MEASURES	
Eyes:	Flush with plenty of water. Call a physician if symptoms occur.
Skin:	Wash with soap and water. Seek medical attention if any effects persist.
Inhalation:	No ill effects expected. Should discomfort occur, move to fresh air.
Ingestion:	Do not induce vomiting unless large amounts are ingested. If conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Contact a physician immediately.
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	
Engineering controls:	General (natural or mechanically induced fresh air movements).
Eye protection:	As appropriate for the work area or work being done.
Skin protection:	Cloth gloves are suitable.
Respiratory protection:	None normally required.
Other:	No additional measures are normally required.

PRECAUTIONS FOR SAFE HANDLING AND USE	
Handling procedures and equipment:	For industrial use only. Keep out of reach of children. Use with adequate ventilation. Keep container closed when not in use. Do not get into the eyes. Avoid prolonged or repeated contact with the skin. Practice good hygiene; i.e., wash after using and before eating or smoking.
Storage requirements:	Store in a cool dry area. Keep from freezing. Store between 5º and 25º C.
Spill, leak or release:	Immediately wipe away spilled material before it hardens. Place in a container for proper disposal.
Waste disposal:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, provincial, and federal safety, health and environmental regulations.
Special shipping instructions:	Avoid temperature extremes. Keep from freezing.

REGULATORY INFORMATION	
WHMIS classification:	D2B
HMIS codes:	Health 1, Flammability 1, Reactivity 0, PPE A
TDG shipping name:	Not regulated.

PREPARATION INFORMATION / CONTACTS			
Prepared by:	Hilti, Inc., Tulsa, OK USA	**Emergency phone number:**	1 800 424 9300
Customer Service:	Hilti (Canada) Corporation, Mississauga, Ontario; 1 800 363 4458		
Health / Safety contacts:	Hilti, Inc., Tulsa, OK USA; 1 800 879 6000, Jerry Metcalf (x6704)		
Abbreviations used:	**N/E** = None Established. **N/A** = Not Applicable. **N/Av** = Not Available. **HMIS:** Hazardous Materials Identification System		

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April 3, 2007 1:15:35 PM

Subject: MSDS 266C

To: info@msds.com

Dear Sir or Madame,

I am a worker using your product CP 601S. Because I use this product every day I am interested in finding out more about the health problems that might occur from long term exposure. I have downloaded your MSDS No 266 and I have a few questions. Under Toxicological properties it says that no effects are expected from chronic exposure. In the handling section it says "avoid prolonged or repeated contact with the skin and cloth gloves are recommended. I'm not completely familiar with HMIS codes but the Health rating is 1 not 0 so some hazard is involved.

I would appreciate clarification of the risk of this product to the skin or any other risk I should be aware of at your earliest convenience.

Thanks.

Your name