

Foam Sealant

Material

CF 812 Flexible Window and Door

Includes:

Technical Data
STC Report Summary
MSDS
LEED

CF 812 Window & Door Pro

Low Pressure Filler Foam

Product Description

CF 812 Window and Door Pro is a low pressure polyurethane foam for use around the perimeter openings of window and door frames (tested in accordance with AAMA 812). This product is ideal for reducing air, sound, dirt, and water infiltration. CF 812 complies with ASTM C 1620, the industry's first specification on aerosol foam sealants.

Applications For Use

- Window and door frame openings
- Skylights
- General insulating

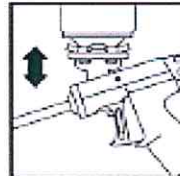
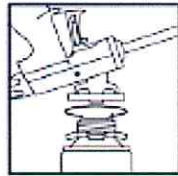


CF 812 Technical Data

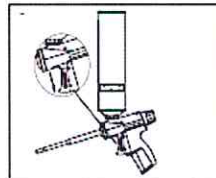
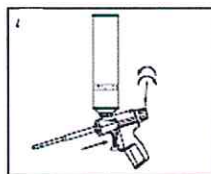
Foam Yield per Can:	Approx 1.30ft ³
Approximate Cure Schedule:	Tack free after approx 8-10 minutes Ready to cut after approx 15-20 minutes
Application Temperature:	41°F to 95°F (5°C to 35°C)
Air Infiltration: (ASTM E 283)	< 0.01 cfm/ft ² @ 1.56 psf (75 Pa)
Water Infiltration: (ASTM E 331)	No Leakage after 15 minute exposure (@ 2.9 psf)
Sound Transmission Classification: (as tested per ASTM E 90)	55
Pressure Build Average: (AAMA 812)	0.79 psi (5.4 kPa)
Dimensional Stability: (AAMA 812)	+/- 2%
Tensile Strength: (HTC Method 2106)	> 6 N/cm ²
R-Value: (ASTM C 518)	4.27
Surface Burning Characteristics: (UL 723)	Flame Spread: 0 Smoke Developed: 5
Shelf Life from Date of Manufacture: (when stored at 68°F)	12 months

Installation Instructions

Mount dispenser on can with the can on a flat surface. Do not over tighten. Shake can vigorously after attaching the dispenser.



Open valve to allow foam to fill dispenser. Unlock the safety on the trigger to allow foam dispensing. Point away and pull trigger to dispense foam. Do not fill rough opening gaps around windows and doors more than 50% to allow for expansion and maximize curing.



Caution:

- Hilti installation instructions shall not supersede the window and/or door manufacturer's instructions.
- Read MSDS, product data sheet, and label on can prior to use.
- Wear protective gloves and eyewear.
- Shut off all pilot lights and other sources of ignition.
- Do not smoke when using this product.

Ordering Information

Foam

<u>Item No.</u>	<u>Description</u>	<u>Qty.</u>
227975	CF 812 Foam (22.5 oz can)	1
3413889	CF 812 Foam (case of 12 cans)	12

Dispensers

<u>Item No.</u>	<u>Description</u>	<u>Qty.</u>
259768	CF-DS1 Dispenser	1
313187	P20-600K Extra Long Dispenser (with 27" barrel)	1
311512	Plastic Nozzle Tip	20

Cleaner

<u>Item No.</u>	<u>Description</u>	<u>Qty.</u>
24631	CF-R1 Cleaner (17 oz can)	1



**ASTM E 90 SOUND TRANSMISSION LOSS
TEST REPORT**

Rendered to:

HILTI, INC.

TYPE: Aerosol Foam Sealants

Summary of Test Results				
ATI Data File No.	Description	R_w	STC	OITC
60856.01A	Composite filler wall, no gaps	57	57	44
60856.01B	Composite filler wall with two 1/2" wide by 48" high by 9-3/4" deep, open gaps in the wall	25	25	26
60856.01C	Composite filler wall with the gaps filled with CF 812 aerosol foam sealant	55*	55*	43*
60856.01D	Composite filler wall with the gaps filled with CF 810 aerosol foam sealant	55*	55*	44*

* - Note – An R_w, STC, or OITC rating can not be applied directly to sealant

Reference should be made to ATI Report No. 60856.01-113-11 for complete test specimen description. The complete test results are listed in Appendix B.



MATERIAL SAFETY DATA SHEET

Product name: CF 812 Insulating Foam – W&D
Description: Polyurethane Foam
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:
Polymeric diphenylmethane diisocyanate	9016-87-9	NE	NE	NE
Isobutane	75-28-5	1000 ppm*	1000 ppm	NE
Propane	074-98-6	1000 ppm	2500 ppm	NE

Abbreviations: PEL = OSHA Permissible Exposure Limit. TLV = ACGIH Threshold Limit Value.
STEL = Short Term Exposure Limit. C = Ceiling. NE = None Established. NA = Not Applicable

PHYSICAL DATA

Appearance:	Yellow to tan liquid.	Odor:	Mild.
Vapor Density: (air = 1)	Not determined.	Vapor Pressure:	8.3 bar @ 68° F
Boiling Point:	Not determined.	VOC Content:	2.4 g/l
Evaporation Rate:	Not determined.	Solubility in Water:	Not soluble.
Specific Gravity:	0.9-1.1	pH:	Not determined.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Flammable Gas	Flammable Limits:	0.4 - 32%
Extinguishing Media:	CO ₂ , Dry Chemical, Foam, Water		
Special Fire Fighting Proc.	None known for cured foam. Uncured isocyanates react with water to release CO ₂ .		
Unusual Fire and Explosion Hazards:	Extremely flammable. Contains flammable propellants under pressure. Aerosol cans exposed to fire or direct heat can rupture from pressure build-up.		

REACTIVITY DATA

Stability:	Reacts with alcohols, amines, aqueous acids, and alkalis. Reacts with water (moisture) producing CO ₂ .l
Hazardous Polymerization:	Will not occur. Reacts with water (nonviolently).
Decomposition Products:	Thermal decomposition can yield CO, CO ₂ , HCN, HCl, NO _x .
Conditions to Avoid:	Temperature extremes will shorten product shelf life; i.e. below 41° F / above 77° F.

HEALTH HAZARD DATA

Known Hazards:	Acute: Eye, skin, and respiratory irritation. Chronic: Respiratory and skin sensitization
Signs and Symptoms of Exposure:	Eyes: Can adhere to cornea. Skin: Can adhere to the skin. Can cause irritation and possibly sensitization; e.g. itching, swelling, rashes, etc. Inhalation: Vapor may cause irritation of the breathing tract and sensitization. Sensitization causes an allergic (asthmatic-like) response. Hypersensitive persons may react at very low isocyanate levels. Ingestion: Effects of ingestion have not been determined. Not a likely route of exposure.
Routes of Exposure:	Inhalation. Contact.
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Immediately flush with large amounts of clean water and seek medical attention.
Skin:	Wipe off skin immediately with soft cloth. Cured foam can only be removed mechanically. Contact a physician if symptoms occur.
Inhalation:	Should symptoms occur, immediately move to fresh air. Call a physician if symptoms persist. Those individuals who develop an allergic reaction should avoid future use of this product.
Ingestion:	Seek medical attention immediately. Do not induce vomiting unless directed by a physician.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	Ensure adequate air movement (natural or mechanically induced fresh air movements).
Eye Protection:	Goggles recommended; safety glasses with side shields as a minimum.
Skin Protection:	Impermeable gloves are recommended. Wear other protective clothing as required to prevent contact with skin.
Respiratory Protection:	Not normally required.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid contact with skin, eyes, and respiratory system. Material will adhere to eyes and skin. Contents under pressure. Extremely flammable. Do not apply direct heat to the cans. Before using, remove ignition sources such as flames or equipment / tools that generate sparks. Store in a cool dry place. Do not store in direct sunlight. Keep from freezing. Store between 41° and 77° F. Always wash thoroughly after handling chemical products. For industrial use only. Keep out of reach of children. Follow label / use instructions.
Spill Procedures:	Wear appropriate personal protective equipment. CF 812 foam will polymerize (cure) upon contact with air/moisture. Allow product to cure, then remove for disposal. See disposal guidelines below.

REGULATORY INFORMATION

TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains 5 - 25% Polymeric diphenylmethane diisocyanate (CAS # 9016-87-9) which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372). (Technical note: MDI is not available in cured foam due to reaction of parts A and B upon exposure to air; i.e. when released from the can)
DOT Shipping Name:	Consumer Commodity, ORM-D.
IATA / ICAO Shipping Name:	Aerosols, flammable, Class 2.1, UN 1950
HMIS Codes:	Health 2, Flammability 3, Reactivity 1, PPE B (Goggles, Gloves)
EPA Waste Code(s):	D001,D003 (for aerosol cans)
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.
Hazard Communication	This MSDS has been prepared in accordance with the Federal OSHA Hazard Communication Standard, 29 CFR1910.1200.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000	Jerry Metcalf	(x1003704)
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 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.

GREEN BUILDING MATERIALS CERTIFICATION FORM

PROJECT NAME: _____

CONTRACTOR: _____

CONTACT NAME: _____ TEL. NO.: _____

SPEC SECTION(S): _____

SUBMITTAL NO.: _____

Product	Vendor or Manufacturer	Total Installed COST	Material COST [excluding labor + equip.]	Contains Recycled Content?		Manufacture Location ³ [City, State]	Raw Materials Origin ⁴ [City, State]	Contains Rapidly Renewables? ⁵ [note %]	For wood products [Y/N]		VOC Content ⁷ [adhesives, sealants, paints, coatings]
				% post consumer ¹	% post industrial ²				FSC Certified? ⁶	No added urea-formaldehyde?	
1. CF 810 C&J Foam	Hilti			NK	NK	Finland	NK	No	N/A	N/A	1.9 g/l
2. CF 812 W&D Foam	Hilti			NK	NK	Finland	NK	No	N/A	N/A	2.4 g/l
3. CF 512 CWP Foam	Hilti			NK	NK	Ohio	NK	No	N/A	N/A	2.0 g/l
4. CF 116 Filler Foam	Hilti			NK	NK	Germany	NK	No	N/A	N/A	2.1 g/l
5.											
6.											
7.											
8.											
9.											
10.											

NK = Not Known N/A = Not Applicable

NOTES / DEFINITIONS:

- 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]
- 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.
- 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 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.
- Raw Materials:** Virgin or recovered resources from which the product's components are made [i.e., before processing or manufacturing].
- 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].
- 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.
- 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: _____

VOC Requirements for Building Products

2/25/09

	LEED ¹	EPA ²	SCAQMD ³	BAAQMD ⁴	Green Seal ⁵
Adhesive & Sealant	250 g/l SCAQMD RULE 1168	Not specified	250 g/l RULE 1168	250 g/l RULE 51	Not specified
Paints	150 g/l - non flat 50 g/l - flat	380 g/l - non flat 250 g/l - flat	50 g/ -non flat 50 g/l - flat RULE 1113	150 g/ -non flat 100 g/l - flat	100 g/ -non flat 50 g/l - flat
Fire Retardant / Resistive Coatings	Not specified	450 g/l (opaque)	350 g/l (pigmented) RULE 1113	350 g/l RULE 3	Not specified

¹ LEED – Leadership in Energy & Environmental Design – Green Building Rating System for New Construction & Major Renovations (LEED-NC) Version 2.1

² EPA 40CFR Part 59 National Volatile Organic Compound Emission Standards for Architectural Coatings

³ South Coast Air Quality Management District – State EPA / Southern California

⁴ Bay Area Air Quality Management District – State EPA / San Francisco Area

⁵ Green Seal - Green Seal is an independent, non-profit organization that strives to achieve a healthier and cleaner environment by identifying and promoting products and services that cause less toxic pollution and waste, conserve resources and habitats, and minimize global warming and ozone depletion. Based in Washington, D.C.