MATERIAL SAFETY DATA SHEET

Product name:	**CF 116-14 Grip Filler Foam**
Description:	Single component urethane resin system with liquefied gas propellant
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:	TLV:	PEL:	STEL:
Tris(1-chloro-2-propyl)phosphate	13674-84-5	NE	NE	NE
4,4'-Diphenylmethane diisocycanate (MDI)	101-68-8	0.051 mg/m^3	NE	C: 0.2 mg/m^3
Propane	74-98-6	1000 ppm	1800 mg/m^3	NE
Butane	106-97-8	1000 ppm	NE	NE
Dimethyl ether	115-10-6	NE	NE	NE
1,1-Difluoroethane	75-37-6	NE	NE	NE

Abbreviations: **PEL** = OSHA Permissible Exposure Limit. **TLV** = ACGIH Threshold Limit Value. These are 8 hour time-weighted averages unless otherwise indicated by **"C"** (Ceiling) or **"STEL"** (Short Term Exposure Limit). **NE** = None Established. **NA** = Not Applicable.

PHYSICAL DATA

Appearance:	Yellowish liquid / foam	**Odor:**	Sweet odor
Vapor Density: (air = 1)	Not determined	**Vapor Pressure:**	80-87 psi @ 68° F
Boiling Point:	Not determined	**VOC Content:**	Not determined
Evaporation Rate:	< .1 (ether = 1)	**Solubility in Water:**	Not soluble
Specific Gravity:	0.9-6.0	**pH:**	Not determined

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Flammable gas	**Flammable Limits:**	LFL = 1.5%; UFL = 18.6%
Extinguishing Media:	CO_2, Dry Chemical, Foam		
Special Fire Fighting Procedures:	Wear full protective clothing. A self-contained breathing apparatus should be worn when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	Contents under pressure. Extremely flammable. Contains flammable propellants. Cans exposed to fire or direct heat can rupture from pressure build-up and be propelled through the air. See below for hazardous decomposition products.		

REACTIVITY DATA

Stability:	Reacts (i.e. expands at a ratio of > 40:1 to form a polyurethane foam) upon contact with air. Contact with moisture or water will also cause material to polymerize (non-violently).
Hazardous Polymerization:	Will not occur.
Incompatibility:	Alcohols, amines, strong bases, and acids. Reacts with water (nonviolently).
Decomposition Products:	When heated to temperatures above 450 C, thermal decomposition products can be released; e.g. CO, HCL, HF and HCN.
Conditions to Avoid:	Excessive heat. Contact with air or moisture will cause foam to polymerize (cure).

HEALTH HAZARD DATA

Known Hazards:	**Acute**: Eye, skin, and respiratory irritation. **Chronic**: Sensitization.
Signs and Symptoms of Exposure:	**Eyes:** Product reacts with moisture and can adhere to the cornea. **Skin:** Contact can cause irritation and sensitization. **Inhalation:** Vapor generated when heated to temperatures > 100° F can cause irritation of the breathing tract. Some individuals can develop an allergic (asthmatic-like) response. Should this occur, immediately move to fresh air. Those individuals who develop an allergic reaction should avoid future use of this product.
Routes of Exposure:	Dermal. Inhalation.
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.
Medical Conditions	Eye, skin, and respiratory conditions.

Aggravated by Exposure:	

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	**Immediately** flush with plenty of water. Contact a Physician immediately.
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 victim to fresh air. Call a Physician if symptoms persist. Those individuals who develop an allergic reaction should avoid future use of this product.
Ingestion:	Contact a Physician 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:	General (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 the skin.
Respiratory Protection:	Not normally required.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid contact with eyes, skin, 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. Keep from freezing. Do not store in direct sunlight. Store between 41° and 77° F (5° to 25° C). Always wash thoroughly after handling chemical products. For industrial use only. Keep away from children. Follow label/use instructions.
Spill Procedures:	Wear appropriate personal protective equipment. Material will polymerize (cure) upon contact with air/moisture. Allow product to harden; then remove for disposal. See disposal guidelines below.

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 2, Flammability 3, Reactivity 1, PPE B (Goggles, Gloves)
DOT Shipping Name:	Limited Quantity - LQ
IATA / ICAO Shipping Name:	Aerosols, flammable, Class 2.1, UN 1950
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains up to 10% 4, 4' diphenylmethane diisocyanate (101-68-8) which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	D001, D003
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 (x1003704)		
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.