Table Of Contents

CF-AS CJP All Seasons Crack & Joint Insulating Foam

. Product data sheet for CF-AS CJP All Seasons Crack & Joint Insulating Foam 1

. ICC ESR-2179 for CF-AS CJP All Seasons Crack & Joint Insulating Foam 3

. Material Safety Data Sheet (MSDS) for CF-AS CJP All Seasons Crack & Joint Insulating Foam 6

. Green Building Materials Certification Form..... 8

CF-AS CJP All Seasons Crack and Joint
Insulating Filler Foam

Product Description

CF-AS CJP All Seasons Crack and Joint Pro is a high performance, high yield polyurethane foam for filling around penetrations and general gap/crack applications in non fire-rated assemblies. This product is ideal for reducing air, sound, dirt, and water infiltration. CF-AS CJP complies with ASTM C 1620, the industry's first specification on aerosol foam sealants. **NOT FOR USE AS A FIRESTOP.**

Applications For Use

- Pipe / cable penetrations
- Blank opening gaps / cracks
- HVAC ducts
- Electrical junction boxes
- Base plate cracks
- Concrete formwork voids
- Metal decking seams
- General insulating

Testing / Approvals

- UL 723
- ASTM C 1620
- ASTM E 90
- ASTM E 283
- ASTM G 21
- UL 1715
- EPA Method 24
- ICC ES – ESR 2179

ICC ES ESR 2179

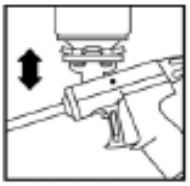
Technical Data

Foam Yield per Can:	Approx 1.60ft^3
Approximate Cure Schedule: (ASTM C 1620)	Tack free after approx 12 minutes Ready to cut after approx 25 minutes
Application Temperature:	32^{o}F to 95^{o}F (0^{o}C to 35^{o}C)
Air Infiltration: (ASTM E 283)	< 0.01 cfm/ft^2 @ 1.56 psf (75Pa)
Water Infiltration: (ASTM E 331)	No Leakage after 15 minute exposure (@ 2.9 psf)
Sound Transmission Classification: (as tested per ASTM E 90)	60
Dimensional Stability: (AAMA 812)	+/- 4%
Tensile Strength: (HTC Method 2106)	> 6 N/cm^2
R-Value: (ASTM C 518)	5.24
Surface Burning Characteristics: (UL 723)	Flame Spread: 0 Smoke Developed: 5
Shelf Life from Date of Manufacture:	12 months

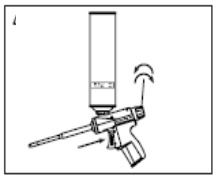
(when stored at 68°F)

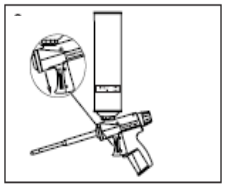
Installation Instructions

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.





Caution:

- 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

Item No.	Description	Qty.
2005479	CF-AS-CJP Foam (24 oz can)	1
3486072	CF-AS CJP Foam (case of 12 cans)	12

Dispensers

Item No.	Description	Qty.
259768	CF-DS1 Dispenser	1
403843	CF-DS-L Extra Long Dispenser (with 27” barrel)	1
311512	Plastic Nozzle Tip	20

Cleaner

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

ICC-ES Report

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 21 00—THERMAL INSULATION

SECTION: 07 84 16—ANNULAR SPACE PROTECTION

REPORT HOLDER:

HILTI, INC.

5400 SOUTH 122ND EAST AVENUE
TULSA, OKLAHOMA 74146

EVALUATION SUBJECT:

HILTI CF-AS-CJP ALL SEASONS CRACK AND JOINT INSULATION FOAM AND FIREBLOCK

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ICC-ES Evaluation Report

ESR-2179

Reissued February 2015

This report is subject to renewal February 2016.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 21 00—Thermal Insulation
Section: 07 84 16—Annular Space Protection

REPORT HOLDER:

HILTI, INC.
5400 SOUTH 122ND EAST AVENUE
TULSA, OKLAHOMA 74146
(800) 879-8000
www.us.hilti.com

EVALUATION SUBJECT:

HILTI CF-AS-CJP ALL SEASONS CRACK AND JOINT INSULATION FOAM AND FIREBLOCK

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Surface-burning characteristics
- Annular space protection

2.0 USES

Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock is an aerosol foam plastic sealant used to fill cracks and voids in construction and the annular space created by the penetration of wood fireblocking by pipes and conduits. The foam plastic product is recognized for use as an alternative to the methods prescribed by the code for maintaining the integrity of penetrations of fire blocking.

3.0 DESCRIPTION

Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock is a single-component, polyurethane foam plastic sealant that expands to take the shape of cracks and voids. The foam plastic has a flame-spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84. The packaging consists of an aerosol delivery configuration.

4.0 INSTALLATION

Installation of Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. The foam plastic must be installed to completely fill the annular space around the penetrations for full depth of the plate that has been penetrated. Use of the foam plastic to fill the annular space or cracks must observe the following limitations:

a. The maximum width of exposed foam plastic or the annular space of penetrations to be sealed must not exceed $1^{5}/_{16}$ inches (33 mm) and the nominal foam thickness must not exceed 1.5 inches.

b. The maximum area of exposed foam plastic must not exceed 8.2 square inches per square foot (568 cm^2/m^2) of wall area.

5.0 CONDITIONS OF USE

The Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Materials and methods of installation must comply with this report and the manufacturer's published installation instructions. In the event of a conflict between the installation instructions and this report, this report governs.

5.2 The sealant must not be used in applications where exposed to sunlight or weather.

5.3 A thermal barrier is not required when installation complies with Section 4.0 of this report.

5.4 Use of Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock is limited to Type V-B construction under the IBC and to construction permitted under the IRC.

5.5 Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock is produced in Belgium under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Manufacturer's descriptive literature.

6.2 Report containing results of testing performed in accordance with ASTM E84 (modified).

6.3 Reports containing results of comparative testing performed in accordance with ASTM E814 (modified).

6.4 Report containing results of testing performed in accordance with NFPA 286.

6.5 Quality documentation.

7.0 IDENTIFICATION

The Hilti CF-AS-CJP All Seasons Crack and Joint Insulation Foam and Fireblock foam plastic sealant described in this report is identified by a stamp bearing the report holder's name (Hilti, Inc.), the product type and the evaluation report number (ESR-2179).

Material Safety Data Sheet
acc. to ISO 11014

Printing date 04/02/2015 Version number 5 Reviewed on 04/02/2015

*
1 Identification

· **Product identifier**

· **Trade name:** **CF-AS CJP; CF ISO 765; CF ISO 500+; CF-I ECO +; CS-F JS; CF 812 CC; CF-F ECO; CF-I 50 ECO GV;CF 125-50; CF 125-5W50; CF 126-N; CF 126; CF ISO 750; CF-I 750 B2 (-SV);CF 116-45; CF F 600; CF 116; CF-JI; CF 812; CF 812 WD; CF-I 65 ECO**

· **Relevant identified uses of the substance or mixture and uses advised against**

· **Sector of Use** Building and construction work

· **Application of the substance / the mixture**
Assembly foam
Construction chemicals

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Hilti, Inc.
5400 South 122nd East Ave.
US-Tulsa, OK 74146
Phone: (800) 879-8000
Fax: (800) 879-7000
Español: (800) 879-5000

· **Information department:**
see section 16
chemicals.hse@hilti.com

· **Emergency telephone number:**
Chem-Trec
Tel.: 1 800 424 9300
Schweizerisches Toxikologisches Informationszentrum - 24 h Service
Tel.: 0041 / 44 251 51 51 (international)
.

*
2 Hazard(s) identification

· **Classification of the substance or mixture**

Flam. Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurized container: May burst if heated.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351	Suspected of causing cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Xn; Sensitising
R42/43: May cause sensitization by inhalation and skin contact.
Xi; Irritant
R36/37/38: Irritating to eyes, respiratory system and skin.
F+; Extremely flammable
R12: Extremely flammable.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
4,4'-diphenylmethanediisocyanate, isomeres and homologues

· **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.

(Contd. on page 2)

Material Safety Data Sheet
acc. to ISO 11014

(Contd. of page 1)

H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

· **Classification system**
· **NFPA ratings (scale 0-4)**

Health = 1
Fire = 4
Reactivity = 1

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

*
3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture consisting of the following components.

· **Dangerous components:**			
9016-87-9	4,4'-diphenylmethanediisocyanate, isomeres and homologues	Xn R20-40-48/20; Xn R42/43; Xi R36/37/38	>25%
13674-84-5	Tris(1-chloro-2-propyl)phosphate	Xn R22 R52/53	10-25%
75-28-5	isobutane	F+ R12	5-15%
106-97-8	butane, pure	F+ R12	5-15%
115-10-6	dimethyl ether	F+ R12	5-15%
74-98-6	propane liquefied	F+ R12	5-15%

· **SVHC** None
· **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation** Supply fresh air; consult doctor in case of complaints.
· **After skin contact** Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.
· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed** Allergic reactions
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with full jet.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Can form explosive gas-air mixtures.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Mount respiratory protective device.

(Contd. on page 3)

HILTI

Material Safety Data Sheet
acc. to ISO 11014

(Contd. of page 2)

· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Keep away from ignition sources
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Do not flush with water or aqueous cleansing agents
· **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling**
Keep receptacles tightly sealed.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:**
Don't spray on a naked flames or any incandecent material
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Contents under pressure. Do not store in direct sunlight. Do not store above 100°F. Do not open or burn even after use.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

· **Storage class** 2 B
· **Specific end use(s)** No further relevant information available.

*
8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
75-28-5 isobutane	
TLV	Short-term value: 2370 mg/m³, 1000 ppm
106-97-8 butane, pure	
REL	Long-term value: 1900 mg/m³, 800 ppm
TLV	Short-term value: 2370 mg/m³, 1000 ppm
115-10-6 dimethyl ether	
WEEL	Long-term value: 1000 ppm
74-98-6 propane liquefied	
PEL	Long-term value: 1800 mg/m³, 1000 ppm
REL	Long-term value: 1800 mg/m³, 1000 ppm
TLV	refer to Appendix F: minimal oxygen content

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Immediately remove all soiled and contaminated clothing
Do not inhale gases / fumes / aerosols.

(Contd. on page 4)

Material Safety Data Sheet
acc. to ISO 11014

(Contd. of page 3)

· **Breathing equipment:**
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
· **Recommended filter device for short term use:**
Filter AX
EN 371
· **Protection of hands:**

Protective gloves.

EN 374
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves** Nitrile rubber, NBR
· **Penetration time of glove material** Value for the permeation: Level ≤ 60
· **Eye protection:**

Tightly sealed goggles.

EN 166 + EN 170
· **Body protection:**

Protective work clothing.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Aerosol
Color:	Different according to coloring
· **Odor:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	<35 °C (<95 °F)
· **Flash point:**	<0 °C (<32 °F) (DIN 53213)
· **Flammability (solid, gaseous)**	Not applicable.
· **Ignition temperature:**	235 °C (455 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1.5 Vol %
Upper:	11 Vol %
· **Vapor pressure:**	Not determined
· **Density:**	Not determined
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
dynamic:	Not determined.
kinematic:	Not determined.

(Contd. on page 5)

Material Safety Data Sheet
acc. to ISO 11014

(Contd. of page 4)

· **Other information**	CF 116 - VOC Content: 2.1 g/l (EPA Method 24) CF 812 - VOC Content: 2.4 g/l (EPA Method 24) CF-AS CJP - VOC Content: 0.012 g/l (EPA Method 24)

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Reacts with alcohols, amines, aqueous acids and alkalis
Danger of bursting
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
9016-87-9 4,4'-diphenylmethanediisocyanate, isomeres and homologues		
Oral	LD50	>5000 mg/kg (rat)
Inhalative	LC50/4h	0.49 mg/l (rat)
13674-84-5 Tris(1-chloro-2-propyl)phosphate		
Oral	LD50	1150 - 1750 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4h	>5 mg/l (rat)
74-98-6 propane liquefied		
Inhalative	LC50/4h	513 mg/l (rat)
115-10-6 dimethyl ether		
Inhalative	LC50/4h	308 mg/l (rat)
75-28-5 isobutane		
Inhalative	LC50/4h	>50 mg/l (rat)
106-97-8 butane, pure		
Inhalative	LC50/4h	658 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

· **IARC (International Agency for Research on Cancer)**		
9016-87-9	4,4'-diphenylmethanediisocyanate, isomeres and homologues	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
13674-84-5 Tris(1-chloro-2-propyl)phosphate	
EC50/48h	65 - 335 mg/l (magna daphnia)
EC50/72h	45 mg/l (Algae)
EC50/96h	56.2 mg/l (fish)
9016-87-9 4,4'-diphenylmethanediisocyanate, isomeres and homologues	
EC50/96h	>1000 mg/l (fish)
115-10-6 dimethyl ether	
EC50/96h	>1000 mg/l (fish)

(Contd. on page 6)

Material Safety Data Sheet
acc. to ISO 11014

Printing date 04/02/2015 **Version number 5** **Reviewed on 04/02/2015**

(Contd. of page 5)

74-98-6 propane liquefied	
EC50/96h	>1000 mg/l (fish)

· **Persistence and degradability** Based on previous experience, this product is inert and non-degradable.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** Does not accumulate in organisms
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
After curing, the product can be disposed of with household waste.
Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

· **European waste catalogue:**	
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27*	paint, inks, adhesives and resins containing dangerous substances

· **Uncleaned packagings:**
· **Recommendation:**
Dispose of packaging according to regulations on the disposal of packagings.
Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1950
· **UN proper shipping name**	
· **DOT**	Aerosols, flammable
· **ADR**	1950 Aerosols
· **IMDG**	AEROSOLS
· **IATA**	AEROSOLS, flammable
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	2.1
· **Label**	2.1
· **ADR**	
· **Class**	2 5F Gases
· **Label**	2.1
· **IMDG, IATA**	
· **Class**	2.1
· **Label**	2.1
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Void
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special marking (ADR):**	None
· **Special marking (IATA):**	None

(Contd. on page 7)

Material Safety Data Sheet
acc. to ISO 11014

(Contd. of page 6)

· **Special precautions for user**	Warning: Gases
· **Danger code (Kemler):**	Void
· **EMS Number:**	F-D,S-U
· **Segregation groups**	None
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **IATA**	
· **Remarks:**	Packing Instruction No. 203
· **UN "Model Regulation":**	UN1950, Aerosols, 2.1

*
15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (Extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

9016-87-9	4,4'-diphenylmethanediisocyanate, isomeres and homologues

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65:**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	4,4'-diphenylmethanediisocyanate, isomeres and homologues	CBD

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

9016-87-9	4,4'-diphenylmethanediisocyanate, isomeres and homologues	4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **Chemical safety assessment:** not required.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
R12 Extremely flammable.
R20 Harmful by inhalation.
R22 Harmful if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitization by inhalation and skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

· **Department issuing SDS:**
Hilti Corporation
Business Unit Chemicals
Quality/Safety/Environment
FL-9494 Schaan / Liechtenstein

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· **Date of preparation / last revision** 04/02/2015 / 4
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. on page 8)

Material Safety Data Sheet
acc. to ISO 11014

Printing date 04/02/2015 **Version number 5** **Reviewed on 04/02/2015**

(Contd. of page 7)

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
· *** Data compared to the previous version altered.**

Revision Date: 10/30/13

GREEN BUILDING MATERIALS CERTIFICATION FORM

PROJECT NAME: _____

CONTRACTOR: _____ SPEC SECTION(S): _____

CONTACT NAME: _____ TEL. NO: _____ 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 Renew-ables? [5] [note %]	For wood products [Y/N]		VOC Content [7] [adhesives, sealants, paints, coatings]
				% post con-sumer [1]	% post indus-trial [2]				FSC Certi-fied? [6]	No added urea-formalde-hyde?	
1. CF-AS CJP Foam	Hilti			NK	NK	Belgium	NK	No	N/A	N/A	0.12 g/l
2. CF 812 W&D Foam	Hilti			NK	NK	Estonia	NK	No	N/A	N/A	2.4 g/l
3. CF 116 Filler Foam	Hilti			NK	NK	Germany	NK	No	N/A	N/A	2.1 g/l
4.											
5.											
6.											
7.											

NK = Not Known N/A = Not Applicable

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 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: _____

VOC Requirements for Building Products 2/25/09

	LEED[1]	EPA[2]	SCAQMD[3]	Green Seal[4]
Adhesive & Sealant	250 g/l SCAQMD RULE 1168	Not specified	250 g/l RULE 1168	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] 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.