

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/13/2016

Revision date: 07/13/2016

Supersedes: 07/13/2016

Version: 20.3

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Name	Cleaner CFR-1; CF 100 R1
Product code	BU Chemicals
Chemical structure	



1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Hilti, Inc.
 Legacy Tower, Suite 1000
 75024 Plano - USA
 T +1 9724035800
 1-800-879-8000 toll free - F +1 918 254 0522

Supplier

Hilti, Inc.
 Legacy Tower, Suite 1000
 75024 Plano - USA
 T +1 9724035800
 1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet

Hilti AG
 Feldkircherstraße 100
 9494 Schaan - Liechtenstein
 T +423 234 2111
chemicals.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) +1 918 8723000 1-800-879-8000 toll free
------------------	---

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Aerosol 1	H222 - Extremely flammable aerosol
Eye Irrit. 2A	H319 - Causes serious eye irritation
STOT SE 3	H336 - May cause drowsiness or dizziness

Full text of H-statements: see section 16

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



GHS02

GHS07

Signal word (GHS-US)

Danger

Hazard statements (GHS-US)

H222 - Extremely flammable aerosol
 H319 - Causes serious eye irritation
 H336 - May cause drowsiness or dizziness

Precautionary statements (GHS-US)

P210 - Keep away from heat, hot surfaces, open flames, sparks. - 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
 P261 - Avoid breathing spray
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Acetone	(CAS No) 67-64-1	40 - 60	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
propan-2-ol, isopropyl alcohol, isopropanol	(CAS No) 67-63-0	25 - 40	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	May cause drowsiness or dizziness.
Symptoms/injuries after eye contact	Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	Extremely flammable aerosol.
Explosion hazard	Pressurised container: May burst if heated.
Reactivity	Extremely flammable aerosol. Pressurised container: May burst if heated.

5.3. Advice for firefighters

Protection during firefighting Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Take up liquid spill into absorbent material.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Avoid breathing spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Storage temperature	41 - 77 °F

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr; CNS impair
OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Acetone (67-64-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	500 ppm
ACGIH	Remark (ACGIH)	eye irr; CNS impair; BEI
OSHA	OSHA PEL (TWA) (mg/m ³)	2400 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls
Personal protective equipment

Ensure good ventilation of the work station.
Gloves. Protective clothing. Protective goggles.



Skin and body protection
Respiratory protection
Environmental exposure controls

Wear suitable protective clothing.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aerosol.
Colour	Colourless
Odour	characteristic
Odour threshold	No data available
pH	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Explosive properties	Pressurised container: May burst if heated.
Oxidising properties	No data available
Vapour pressure	2500 - 2900 hPa at 20 °C
Relative density	No data available
Relative vapour density at 20 °C	No data available
Density	0.74 - 0.76 g/cm ³
Solubility	No data available
Log Pow	No data available

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Not classified

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)
ATE US (oral)	5800.000 mg/kg bodyweight
ATE US (dermal)	20000.000 mg/kg bodyweight
ATE US (gases)	30000.000 ppmv/4h
ATE US (vapours)	71.000 mg/l/4h
ATE US (dust,mist)	71.000 mg/l/4h

Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified
Symptoms/injuries after eye contact	Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acetone (67-64-1)	
LC50 fish 1	6210 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1	8800 mg/l (48 h; Daphnia pulex)
LC50 fish 2	5540 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	13000 ppm (96 h; Gambusia affinis; Turbulent water)
TLM fish 2	> 1000 ppm (96 h; Pisces)
Threshold limit other aquatic organisms 1	3000 mg/l (Plankton)
Threshold limit other aquatic organisms 2	28 mg/l (Protozoa)
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH = 7)
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)

12.2. Persistence and degradability

Acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.43 g O ₂ /g substance
Chemical oxygen demand (COD)	1.92 g O ₂ /g substance
ThOD	2.20 g O ₂ /g substance
BOD (% of ThOD)	(20 day(s)) 0.872

12.3. Bioaccumulative potential

Acetone (67-64-1)	
BCF fish 1	0.69 (Pisces)
BCF other aquatic organisms 1	3
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Acetone (67-64-1)	
Surface tension	0.0237 N/m

12.5. Other adverse effects

Effect on the global warming No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods Dispose of contents/container in accordance with licensed collector's sorting instructions.

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	1950
UN-No. (IMDG)	1950
UN-No. (IATA)	1950
UN-No. (ADN)	1950
UN-No. (RID)	1950

14.2. UN proper shipping name

Proper Shipping Name (ADR)	AEROSOLS
Proper Shipping Name (IMDG)	AEROSOLS
Proper Shipping Name (IATA)	Aerosols, flammable
Proper Shipping Name (ADN)	AEROSOLS
Proper Shipping Name (RID)	AEROSOLS
Transport document description (ADR)	UN 1950 AEROSOLS, 2.1, (D)
Transport document description (IMDG)	UN 1950 AEROSOLS, 2.1

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	2.1
Danger labels (ADR)	2.1



IMDG

Transport hazard class(es) (IMDG)	2.1
Danger labels (IMDG)	2.1



IATA

Transport hazard class(es) (IATA)	2.1
Hazard labels (IATA)	2.1



ADN

Transport hazard class(es) (ADN)	2.1
Danger labels (ADN)	2.1

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



RID

Transport hazard class(es) (RID)	2.1
Danger labels (RID)	2.1



14.4. Packing group

Packing group (ADR)	Not applicable
Packing group (IMDG)	Not applicable
Packing group (IATA)	Not applicable
Packing group (ADN)	Not applicable
Packing group (RID)	Not applicable

14.5. Environmental hazards

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	5F
Special provisions (ADR)	190, 327, 344, 625
Limited quantities (ADR)	1I
Packing instructions (ADR)	P207, LP02
Mixed packing provisions (ADR)	MP9
Tunnel restriction code (ADR)	D

- Transport by sea

Special provisions (IMDG)	63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	SP277
Packing instructions (IMDG)	P207, LP02
EmS-No. (Fire)	F-D
EmS-No. (Spillage)	S-U
Stowage category (IMDG)	None
Stowage and segregation (IMDG)	Protected from sources of heat For AEROSOLS with a maximum capacity of 1 litre: Category A. Segregation as for class 9 but 'Separated from' class 1 except division 1.4. For AEROSOLS with a capacity above 1 litre: Category B. Segregation as for the appropriate sub-division of class 2. For WASTE AEROSOLS: Category C. Clear of living quarters. Segregation as for the appropriate sub-division of class 2.

MFAG-No 126

- Air transport

PCA packing instructions (IATA)	203
PCA max net quantity (IATA)	75kg

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Special provisions (IATA) A145, A167, A802

- Inland waterway transport

Classification code (ADN)	5F
Special provisions (ADN)	19, 327, 344, 625
Limited quantities (ADN)	1 L
Excepted quantities (ADN)	E0
Equipment required (ADN)	PP, EX, A
Ventilation (ADN)	VE01, VE04
Number of blue cones/lights (ADN)	1
Carriage prohibited (ADN)	No
Not subject to ADN	No

- Rail transport

Special provisions (RID)	190, 327, 344, 625
Limited quantities (RID)	1L
Packing instructions (RID)	P207, LP02
Carriage prohibited (RID)	No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol 1 H222;H229
 Eye Irrit. 2 H319
 STOT SE 3 H336

Full text of hazard classes and H-statements : see section 16

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Revision date 07/13/2016

Cleaner CFR-1; CF 100 R1

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Aerosol 1	Flammable aerosols, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

SDS_US_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product