CFR 1

Safety Data Sheet

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

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SECTION 1: Identification

1.1. Identification

Product form	Mixture
Trade name	CFR 1
Product code	BU Fire Protection

1.2. Recommended use and restrictions on use

Use of the substance/mixture	Spray cleaners

1.3. Supplier

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
US TX 75024 Plano
USA
T +1 9724035800
1-800-879-8000 toll free, F +1 918 254 0522
us-sales@hilti.com

Department issuing data specification sheet
Hilti AG
Feldkircherstraße 100
FL 9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-fire.protection@hilti.com

1.4. Emergency telephone number

Emergency number	Emergency CONTACT (24-Hour-Number) GBK/Infotrac ID 101022 (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable aerosols, Category 1	H222	Extremely flammable aerosol.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

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, sparks, open flames and other ignition sources. No smoking. P211 - Do not spray on an open flame or other ignition source. P251 - Do not pierce or burn, even after use. P261 - Avoid breathing spray. P280 - Wear eye protection, protective clothing, protective gloves. 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 which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Acetone	CAS-No.: 67-64-1	40 – 80	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of hazard classes and 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/doctor 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 (acute and delayed)

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

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard	Extremely flammable aerosol.
Explosion hazard	Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire	Carbon dioxide. Carbon monoxide. Vapours may form explosive mixture with air.

5.3. Special protective equipment and precautions for fire-fighters

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. 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

CFR 1	
No additional information available	

Acetone (67-64-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetone
ACGIH OEL TWA	250 ppm
ACGIH OEL STEL	500 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2023
USA - ACGIH - Biological Exposure Indices	
Local name	ACETONE
BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift - Notations: Ns
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Acetone
OSHA PEL TWA	2400 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls	Ensure good ventilation of the work station.
Environmental exposure controls	Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Protective clothing. Protective goggles.

Hand protection:				
Wear suitable gloves tested to EN374. Suitable for short-term work or as a splash guard: Nitrile rubber gloves (> 0.2 mm). In case of permanent product contact:				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Protective gloves	Butyl rubber	6 (> 480 minutes)	0,5mm	

Eye protection:		
Type	**Field of application**	**Characteristics**
Safety glasses		

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Ensure good ventilation of the work station. If the occupational exposure limit is exceeded: Wear appropriate mask. (e.g. gas filter type A1-P2 according to EN 14387)

Personal protective equipment symbol(s):

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)	Extremely flammable aerosol.
Vapour pressure	2500 – 2900 hPa at 20 °C
Relative vapour density at 20°C	No data available
Relative density	No data available
Density	0.74 – 0.76 g/cm³
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive limits	No data available
Explosive properties	Pressurised container: May burst if heated.
Oxidising properties	No data available

9.2. Other information

Heat of combustion	> 30 kJ/g NFPA 30B, Aerosol Classification Level: 3

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 (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat, Female, Experimental value, Oral, 14 day(s))
LD50 oral	6667 mg/kg
LD50 dermal rabbit	> 15800 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 dermal	20000 mg/kg
LC50 Inhalation - Rat	132 mg/l (3 h, Rat, Male, Experimental value, Inhalation (vapours))

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
STOT-single exposure	May cause drowsiness or dizziness.

Acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Viscosity, kinematic	No data available
Symptoms/effects	May cause drowsiness or dizziness.
Symptoms/effects 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 – 8120 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Measured concentration)
EC50 - Crustacea [1]	> 12700 mg/l
ErC50 algae	> 530 mg/l 96h, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Acetone (67-64-1)	
Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O_2/g substance
Chemical oxygen demand (COD)	1.92 g O_2/g substance
ThOD	2.2 g O_2/g substance

12.3. Bioaccumulative potential

Acetone (67-64-1)	
BCF - Fish [1]	0.69 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Acetone (67-64-1)	
Surface tension	23.3 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1950	Not applicable	1950	1950
14.2. Proper Shipping Name			
Aerosols (flammable, (each not exceeding 1 L capacity))	Not applicable	AEROSOLS	Aerosols, flammable
14.3. Transport hazard class(es)			
2.1	Not applicable	2.1	2.1
	Not applicable		
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Not applicable	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1950
DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : None
DOT Packaging Bulk (49 CFR 173.xxx) : None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg
DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 25 - Protected from sources of heat,87 - Stow ‘‘separated from’’ Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

TDG

Not applicable

IMDG

Special provisions (IMDG) : 63, 190, 277, 327, 344, 959
Limited quantities (IMDG) : SP277
Packing instructions (IMDG) : P207, LP02
EmS-No. (Fire) : F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage) : S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG) : None
MFAG-No : 126

IATA

PCA packing instructions (IATA)	:	203
PCA max net quantity (IATA)	:	75kg
CAO packing instructions (IATA)	:	203
Special provisions (IATA)	:	A145, A167, A802

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Acetone (67-64-1)	
CERCLA RQ	5000 lb

15.2. International regulations

Acetone (67-64-1)
Listed on Thailand Existing Chemicals Inventory (DIW)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date 11/13/2024

Full text of H-statements	
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Abbreviations and acronyms	
CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value

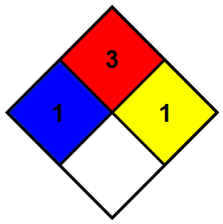
Abbreviations and acronyms	
BOD	Biochemical oxygen demand (BOD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class
VOC	Volatile Organic Compounds
SDS	Safety Data Sheet
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PNEC	Predicted No-Effect Concentration
PBT	Persistent Bioaccumulative Toxic
OEL	Occupational Exposure Limit
OECD	Organisation for Economic Co-operation and Development
COD	Chemical oxygen demand (COD)
ThOD	Theoretical oxygen demand (ThOD)
TRGS	Technical Rules for Hazardous Substances
TLM	Median Tolerance Limit

Abbreviations and acronyms	
STP	Sewage treatment plant

NFPA health hazard — 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard — 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity — 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
			general update
8		Modified	

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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.