CFR 1

Safety Data Sheet

according to the Hazardous Substances and New Organisms Act (1996)

Issue date: 05/08/2022 Revision date: 05/08/2022 Supersedes: 01/02/2019 Version: 3.1

SECTION 1: Identification of the hazardous chemical and of the supplier

1.1 Product identifier

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

1.2 Other means of identification

No additional information available

1.3 Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.4 Supplier's details

Supplier
Hilti (New Zealand) Ltd.
Level 1, Building B 600 South Road
Ellerslie
1051 Auckland - New Zealand
T +64 9 571 9995
, 800 444 584 toll free - F +64 9526 7780
servicenz@hilti.com

Department issuing data specification sheet
Hilti AG
Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111
chemicals.hse@hilti.com

1.5. Emergency phone number

Emergency number: Schweizerisches Toxikologisches Informationszentrum – 24h Service
+41 44 251 51 51 (international)
+64 9 571 9995
; 800 444 584 toll free

Country	Organisation/Company	Address	Emergency number
New Zealand	National Poisons Centre		0800 623 000

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

HSNO Approval Number: HSR002515

2.1.2A	Aerosol, Category 1
6.4A	Serious eye damage/eye irritation, Category 2
6.9B (Narcotic)	Specific target organ toxicity – Single exposure, Category 3, Narcosis

2.2. Label elements

GHS NZ labelling

Hazard pictograms (GHS NZ)	 GHS02  GHS07
Signal word (GHS NZ)	Danger
Contains	Acetone (40 – 60 %); ethyl acetate (10 – 25 %)
Hazard statements (GHS NZ)	H222 - Extremely flammable aerosol. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.
Prevention	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.
Response	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C

2.3. Other hazards not contributing to the classification

No additional information available

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.	Classification according to GHS NZ
Acetone	(CAS-No.) 67-64-1	40 – 60	3.1B: Flam. Liq. 2, H225 6.4A: Eye Irrit. 2, H319 6.9B (Narcotic) : STOT SE 3, H336
ethyl acetate	(CAS-No.) 141-78-6	10 – 25	3.1B: Flam. Liq. 2, H225 6.4A: Eye Irrit. 2A, H319 6.9B (Narcotic) : STOT SE 3, H336
isobutane	(CAS-No.) 75-28-5	< 25	2.1.1A: Flam. Gas 1, H220 Press. Gas (Comp.), H280
propane	(CAS-No.) 74-98-6	< 10	2.1.1A: Flam. Gas 1, H220 Press. Gas (Comp.), H280

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. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
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. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
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. Rinse mouth. Do NOT induce vomiting.

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

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

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

Other medical advice or treatment	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Dry powder. Carbon dioxide. Sand. Alcohol resistant foam.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

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

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

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. Evacuate unnecessary personnel.

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". Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapours/spray.
Emergency procedures	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling.

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.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	5 – 25 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propane (74-98-6)	
New Zealand - Occupational Exposure Limits	
Local name	Propane
Remark (NZ)	Simple asphyxiant – may present an explosion hazard
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 13th Edition

Acetone (67-64-1)	
New Zealand - Occupational Exposure Limits	
Local name	Acetone
WES-TWA (OEL TWA) [1]	1185 mg/m³
WES-TWA (OEL TWA) [2]	500 ppm
WES-STEL (OEL STEL)	2375 mg/m³
WES-STEL (OEL STEL) [ppm]	1000 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 13th Edition
New Zealand - Biological Exposure Indices	
Local name	Acetone
BEI	50 mg/l Parameter: Acetone - Medium: Urine - Sampling time: End of shift
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 13th Edition

ethyl acetate (141-78-6)	
New Zealand - Occupational Exposure Limits	
Local name	Ethyl acetate
WES-TWA (OEL TWA) [1]	720 mg/m³
WES-TWA (OEL TWA) [2]	200 ppm
Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 13th Edition

Exposure limit values for the other components

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.4. Individual protection measures, such as personal protective equipment (PPE)

Hand protection: Wear protective gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)				EN ISO 374

Eye protection: Chemical goggles or safety glasses

Type	Field of application	Characteristics	Standard
Safety glasses			EN 166, EN 171

Skin and body protection: Wear suitable protective clothing

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

Device	Filter type	Condition	Standard
	Filter AX (brown)		

Personal protective equipment symbol(s)

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state	Liquid
Appearance	Aerosol.
Colour	Colourless
Odour	characteristic
Odour threshold	No data available
pH	No data available
Evaporation rate	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point / Freezing point	Melting point : Not applicable
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Flammability (solid, gas)	Extremely flammable aerosol.
Vapour pressure	Vapour pressure : 2500 – 2900 hPa at 20 °C
Relative density	No data available
Density	Density : 0.74 – 0.76 g/cm³
Solubility	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Pressurised container: May burst if heated.
Explosive limits	No data available

Minimum ignition energy	No data available

SECTION 10: Stability and reactivity

Reactivity	Extremely flammable aerosol. Pressurised container: May burst if heated.
Chemical stability	Stable under normal conditions. Not established.
Possibility of hazardous reactions	No dangerous reactions known under normal conditions of use. Not established.
Conditions to avoid	Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures.
Incompatible materials	Strong acids. Strong bases.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide.

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 dermal rabbit	> 15800 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	76 mg/l (4 h, Rat, Female, Weight of evidence, Inhalation (vapours))

ethyl acetate (141-78-6)	
LD50 oral rat	10200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 20000 mg/kg bodyweight (24 hour cuff method, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))

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.
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

CFR 1	
Vaporizer	Aerosol
Viscosity, kinematic	

Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.

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.

Hazardous to the aquatic environment, short–term (acute)	Not classified
Hazardous to the aquatic environment, long–term (chronic)	Not classified
Soil toxicity	Not classified
Terrestrial vertebrate toxicity	Not classified
Terrestrial invertebrate toxicity	Not classified
Other information	Avoid release to 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)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
LD50 dermal rabbit	> 15800 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 oral rat	5800 mg/kg (Rat, Female, Experimental value, Oral, 14 day(s))
ethyl acetate (141-78-6)	
LC50 - Fish [1]	230 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
BCF - Fish [1]	30 (3 day(s), Leuciscus idus, Static renewal, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)
LD50 dermal rabbit	> 20000 mg/kg bodyweight (24 hour cuff method, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LD50 oral rat	10200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))

12.2. Persistence and degradability

CFR 1	
Persistence and degradability	Not established.
isobutane (75-28-5)	
Not rapidly degradable	
propane (74-98-6)	
Not rapidly degradable	
Acetone (67-64-1)	
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
ethyl acetate (141-78-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.293 g O_2/g substance
Chemical oxygen demand (COD)	1.69 g O_2/g substance
ThOD	1.82 g O_2/g substance

12.3. Bioaccumulative potential

CFR 1	
Bioaccumulative potential	Not established.
Acetone (67-64-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)

Acetone (67-64-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Bioaccumulative potential	Not bioaccumulative.
ethyl acetate (141-78-6)	
BCF - Fish [1]	30 (3 day(s), Leuciscus idus, Static renewal, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

CFR 1	
Mobility in soil	No additional information available
Acetone (67-64-1)	
Surface tension	23.3 mN/m (20 °C)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
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.
ethyl acetate (141-78-6)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Ozone: Not classified

Other adverse effects: No additional information available

SECTION 13: Disposal considerations

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

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number			
UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS
Transport document description			
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)			
2.1	2.1	2.1	2.1

ADR	IMDG	IATA	RID
			
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
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)	1l
Packing instructions (ADR)	P207, LP02
Mixed packing provisions (ADR)	MP9
Transport category (ADR)	2
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
MFAG-No	126

Air transport

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

Rail transport

Special provisions (RID)	190, 327, 344, 625
Limited quantities (RID)	1L
Packing instructions (RID)	P207, LP02

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

Not applicable

14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Hazardous Substances and New Organisms Act

HSNO Approval Number HSR002515

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Issue date 5/08/2022

Revision date 05/08/2022

Supersedes 01/02/20190

Indication of changes:

Section	Changed item	Change	Comments
3		Modified	

Other information None.

Full text of H-statements:

2.1.1A: Flam. Gas 1	2.1.1A: Flammable gases, Category 1
2.1.2A: Aerosol 1	2.1.2A: Aerosol, Category 1
3.1B: Flam. Liq. 2	3.1B: Flammable liquids, Category 2
6.4A: Eye Irrit. 2	6.4A: Serious eye damage/eye irritation, Category 2
6.4A: Eye Irrit. 2A	6.4A: Serious eye damage/eye irritation, Category 2A
6.9B (Narcotic) : STOT SE 3	6.9B (Narcotic) : Specific target organ toxicity – Single exposure, Category 3, Narcosis
Press. Gas (Comp.)	Gases under pressure : Compressed gas
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

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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.