

# GC 22

## Safety Data Sheet

according to the Hazardous Substance SDS Notice 2017 (EPA)

Issue date: 31/03/2023

Revision date: 31/03/2023

Supersedes: 06/08/2013

Version: 24.00

### SECTION 1: Identification

#### 1.1 Product identifier

Name	GC 22
Product form	Mixture
Chemical structure	
Product code	BU Direct Fastening

#### 1.2 Other means of identification

No additional information available

#### 1.3 Recommended use of the chemical and restrictions on use

Recommended use	For professional use only Propellant for direct fastening tools.
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#### 1.4 Details of manufacturer or importer

##### Supplier

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

##### Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH  
Hiltistrasse 6  
Kaufering 86916  
Deutschland  
T +49 8191 906310 - F +49 8191 90176310  
[df-hse@hilti.com](mailto:df-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
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### SECTION 2: Hazard identification

#### 2.1. Classification of the hazardous chemical

Classification according to the Environmental Protection Authority notices (EPA Hazardous Substances and New Organisms Act 1996)

Flammable gases, Category 1A	H220
Gases under pressure : Compressed gas	H280

#### 2.2. GHS Label elements, including precautionary statements

##### GHS NZ labelling

Hazard pictograms (GHS NZ)



Signal word (GHS NZ)	Danger
Hazard statements (GHS NZ)	H220 - Extremely flammable gas H280 - Contains gas under pressure; may explode if heated
Precautionary statements	P102 - Keep out of reach of children.
Prevention	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Response	P211 - Do not spray on an open flame or other ignition source.
Storage	P251 - Do not pierce or burn, even after use. P381 - In case of leakage, eliminate all ignition sources. P403 - Store in a well-ventilated place. 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

## SECTION 3: Composition and information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to GHS NZ
isobutane	CAS-No.: 75-28-5	55 - <65	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
propene	CAS-No.: 115-07-1	20 - <30	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
Propane	CAS-No.: 74-98-6	5 - <15	Flam. Gas 1A, H220 Press. Gas (Comp.), H280

## SECTION 4: First-aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general	Take off immediately all contaminated clothing.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Gently wash with plenty of soap and water.
First-aid measures after eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	Immediately consult a doctor/medical service.

### 4.2. Symptoms caused by exposure

No additional information available

### 4.3. Medical attention and special treatment

Other medical advice or treatment	Treat symptomatically.
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## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

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

### 5.2. Specific hazards arising from the chemical

Explosion hazard	Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
General measures	Evacuate area. Remove ignition sources.
Hazardous decomposition products in case of fire	On burning: release of (highly) toxic gases/vapours. Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

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### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	DO NOT fight fire when fire reaches explosives. Evacuate area.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.
Other information	EN 12942. EN 12941.
EAC code	2YE - 2YE

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	Evacuate area. Remove ignition sources.
<b>6.1.1. For non-emergency personnel</b>	
Emergency procedures	Ventilate spillage area. Evacuate area. No open flames, no sparks, and no smoking.
<b>6.1.2. For emergency responders</b>	
Protective equipment	Do not attempt to take action without suitable protective equipment. Breathing apparatus.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

### 6.3. Methods and materials for containment and cleaning up

Methods for cleaning up	Do not flush with water.
Reference to other sections (13)	For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed	Flammable gas. Do not pierce or burn, even after use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling	Do not spray on an open flame or other ignition source. Avoid contact with skin, eyes and clothing. Do not breathe vapours. Prevent the build-up of electrostatic charge.
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

Technical measures	Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	Keep cool. Protect from sunlight. Keep in fireproof place. Store in dry protected location to prevent any moisture contact.
Incompatible materials	Heat sources. Direct sunlight. Sources of ignition.
Storage temperature	5 – 25 °C
Heat and ignition sources	Keep away from heat and direct sunlight. Keep away from ignition sources.
Information on mixed storage	Do not store with DX powder cartridges.

## SECTION 8: Exposure controls and personal protection

### 8.1. Control parameters - exposure standards

<b>GC 22</b>	
<b>New Zealand - Occupational Exposure Limits</b>	
Local name	Propane
Remark (NZ)	Simple asphyxiant – may present an explosion hazard



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Auto-ignition temperature	No data available
Flammability	Extremely flammable gas.
Vapour pressure	Vapour pressure: 8300 hPa
Relative density	No additional information available
Density	Density: 0.6 g/cm <sup>3</sup> (DIN 51757)
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Viscosity, dynamic	No data available
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Explosive limits	1.7 vol % 11.1 vol %
Minimum ignition energy	No data available
Gas group	Gases under pressure : Compressed gas

### SECTION 10: Stability and reactivity

Reactivity	No additional information available
Chemical stability	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Heat. Sparks. Open flame. Direct sunlight. Overheating.
Incompatible materials	No additional information available
Hazardous decomposition products	No additional information available

### SECTION 11: Toxicological information

#### 11.1. Toxicity

Acute toxicity (oral)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met)

isobutane (75-28-5)	
LC50 Inhalation - Rat [ppm]	> 18000 ppm

propene (115-07-1)	
LC50 Inhalation - Rat	> 688 mg/m <sup>3</sup>

Propane (74-98-6)	
LC50 Inhalation - Rat [ppm]	> 280000 ppm (literature)

Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	Not classified (Not applicable)

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Vaporizer	Container fitted with a sealed spray attachment

Potential adverse human health effects and symptoms	No additional information available. No harmful effects are to be expected if used properly. The contained ingredients can be harmful, but they are hermetically enclosed in the article and can not be released. The dismantling of the article is prohibited.
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### SECTION 12: Ecological information

#### 12.1. Ecotoxicity

Ecology - general	Due to the consistency along with the low water solubility of the product a bioavailability is unlikely.
Hazardous to the aquatic environment, short-term (acute)	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	Not classified
Soil toxicity	Not classified (Based on available data, the classification criteria are not met)
Terrestrial vertebrate toxicity	Not classified
Terrestrial invertebrate toxicity	Not classified
Other information	Avoid release to the environment.

<b>isobutane (75-28-5)</b>	
LC50 - Fish [1]	24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR))
EC50 - Crustacea [1]	7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR))
ErC50 algae	7.71 – 16.5 mg/l (Quantitative structure-activity relationship (QSAR))
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)
<b>propene (115-07-1)</b>	
LC50 - Fish [1]	43.3 mg/l (72 h; Oncorhynchus mykiss (Rainbow trout); Quantitative structure-activity relationship (QSAR))
EC50 - Crustacea [1]	28.2 mg/l (48 h; daphnia; Quantitative structure-activity relationship (QSAR))
Partition coefficient n-octanol/water (Log Kow)	1.77 (20 °C)

#### 12.2. Persistence and degradability

<b>GC 22</b>	
Persistence and degradability	No additional information available
<b>isobutane (75-28-5)</b>	
Persistence and degradability	Readily biodegradable.
<b>propene (115-07-1)</b>	
Persistence and degradability	Readily biodegradable in water.
<b>Propane (74-98-6)</b>	
Persistence and degradability	Readily biodegradable in water.

#### 12.3. Bioaccumulative potential

<b>GC 22</b>	
Bioaccumulative potential	No additional information available
<b>isobutane (75-28-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)
Bioaccumulative potential	Bioaccumulation unlikely.
<b>propene (115-07-1)</b>	
Partition coefficient n-octanol/water (Log Kow)	1.77 (20 °C)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).
<b>Propane (74-98-6)</b>	
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

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### 12.4. Mobility in soil

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Mobility in soil	No additional information available
isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)
propene (115-07-1)	
Partition coefficient n-octanol/water (Log Kow)	1.77 (20 °C)

### 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	Container under pressure. Do not drill or burn even after use.
Additional information	Flammable vapours may accumulate in the container.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
<b>14.1. UN number or ID number</b>			
UN 3150	UN 3150	UN 3150	UN 3150
<b>14.2. UN proper shipping name</b>			
HYDROCARBON GAS REFILLS FOR SMALL DEVICES	HYDROCARBON GAS REFILLS FOR SMALL DEVICES	Hydrocarbon gas Refills for small devices	HYDROCARBON GAS REFILLS FOR SMALL DEVICES
<b>Transport document description</b>			
UN 3150 HYDROCARBON GAS REFILLS FOR SMALL DEVICES, 2.1, (D)	UN 3150 HYDROCARBON GAS REFILLS FOR SMALL DEVICES, 2.1	UN 3150 Hydrocarbon gas Refills for small devices, 2.1	UN 3150 HYDROCARBON GAS REFILLS FOR SMALL DEVICES, 2.1
<b>14.3. Transport hazard class(es)</b>			
2.1	2.1	2.1	2.1
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
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			

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### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	6F
Limited quantities (ADR)	0
Excepted quantities (ADR)	E0
Packing instructions (ADR)	P209
Mixed packing provisions (ADR)	MP9
Transport category (ADR)	2
Special provisions for carriage - Loading, unloading and handling (ADR)	CV9
Special provisions for carriage - Operation (ADR)	S2
Tunnel restriction code (ADR)	D
EAC code	2YE

#### Transport by sea

Limited quantities (IMDG)	0
Excepted quantities (IMDG)	E0
Packing instructions (IMDG)	P003
EmS-No. (Fire)	F-D
EmS-No. (Spillage)	S-U
Stowage category (IMDG)	B
Stowage and handling (IMDG)	SW2
MFAG-No	115

#### Air transport

PCA Excepted quantities (IATA)	E0
PCA Limited quantities (IATA)	Forbidden
PCA limited quantity max net quantity (IATA)	Forbidden
PCA packing instructions (IATA)	201
PCA max net quantity (IATA)	1kg
CAO packing instructions (IATA)	201
CAO max net quantity (IATA)	15kg
Special provisions (IATA)	A802
ERG code (IATA)	10L

#### Rail transport

Classification code (RID)	6F
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P209
Mixed packing provisions (RID)	MP9
Transport category (RID)	2
Special provisions for carriage - Loading, unloading and handling (RID)	CW9
Colis express (express parcels) (RID)	CE2
Hazard identification number (RID)	23

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

No additional information available



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### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Issue date 31/03/2023  
Revision date 31/03/2023  
Supersedes 06/08/2013

Indication of changes			
Section	Changed item	Change	Comments
	General		
1	Use of the substance/mixture	Modified	
2.2	Hazard pictograms (GHS NZ)	Added	
2.2	Precautionary statements (GHS NZ)	Modified	
8.4	Personal protective equipment	Modified	
9	Physical and chemical hazards	Modified	
11	Toxicological information	Modified	
12	Ecotoxicological information	Modified	

Data sources

European Chemicals Agency, <http://echa.europa.eu/>. manufacturer.

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

### Training advice

Full text of H-statements	
Flam. Gas 1A	Flammable gases, Category 1A
Press. Gas (Comp.)	Gases under pressure : Compressed gas
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

### SDS NZ 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.