

# GC 22

## Safety Data Sheet

according to the WHS Regulations

Issue date: 31/03/2023

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Version: 24.00

### SECTION 1: Product identifier

#### 1.1. GHS Product identifier

Product form Mixture  
Name GC 22  
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.

#### 1.4. Details of manufacturer or importer

**Supplier**  
Hilti (Aust.) Pty. Ltd.  
Level 5, 1G Homebush Bay Drive  
P.O. Box 3217  
Rhodes NSW 2138  
Australia  
T +61 131 292 - F +61 1300 135 042  
[serviceaustralia@hilti.com](mailto:serviceaustralia@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)  
+61 2 8748 1000

### SECTION 2: Hazard identification

#### 2.1. Classification of the hazardous chemical

##### Classification according to the model Work Health and Safety Regulations (WHS Regulations)

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

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

Hazard pictograms (GHS AU)



Flame

Gas cylinder

Signal word (GHS AU)

Danger

Hazard statements (GHS AU)

H220 - Extremely flammable gas  
H280 - Contains gas under pressure; may explode if heated

Precautionary statements (GHS AU)

P102 - Keep out of reach of children.  
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.  
P381 - In case of leakage, eliminate all ignition sources.

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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

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
isobutane	75-28-5	55 - <65	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
propene	115-07-1	20 - <30	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
Propane	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.

## 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.

### 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.

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### SECTION 6: Accidental release measures

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

General measures Evacuate area. Remove ignition sources.

##### 6.1.1. For non-emergency personnel

Emergency procedures Ventilate spillage area. Evacuate area. No open flames, no sparks, and no smoking.

##### 6.1.2. For emergency responders

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.

### 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

No additional information available

#### 8.2. Monitoring methods

No additional information available

#### 8.3. 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 In case of repeated or prolonged contact wear gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)	0,12		EN ISO 374

Eye protection Chemical goggles or safety glasses. ISO 16321-1. EN 170

Skin and body protection When using cartridge operated tools, sufficient ear protection must be worn.

Respiratory protection No respiratory protection needed under normal use conditions

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### Personal protective equipment symbol(s)



### SECTION 9: Physical and chemical properties

Physical state	Gas
Appearance	No data available
Colour	Colourless
Odour	Sweet
Odour threshold	No data available
pH	No data available
pH solution	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point / Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Flammability	No data available
Vapour pressure	Vapour pressure: 8300 hPa
Relative density	No data 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
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Explosive limits	No data available
Minimum ignition energy	No data available
Fat solubility	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

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

<b>isobutane (75-28-5)</b>	
LC50 Inhalation - Rat [ppm]	> 18000 ppm
<b>propene (115-07-1)</b>	
LC50 Inhalation - Rat	> 688 mg/m <sup>3</sup>
<b>Propane (74-98-6)</b>	
LC50 Inhalation - Rat [ppm]	> 280000 ppm (literature)
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met)

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Serious eye damage/irritation	Not classified
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 (Based on available data, the classification criteria are not met)

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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

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

### 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 (Not applicable)
Hazardous to the aquatic environment, long-term (chronic)	Not classified (Not applicable)
Other information	Avoid release to the environment.

isobutane (75-28-5)	
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)

propene (115-07-1)	
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

isobutane (75-28-5)	
Persistence and degradability	Readily biodegradable.

propene (115-07-1)	
Persistence and degradability	Readily biodegradable in water.

Propane (74-98-6)	
Persistence and degradability	Readily biodegradable in water.

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### 12.3. Bioaccumulative potential

isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)
Bioaccumulative potential	Bioaccumulation unlikely.
propene (115-07-1)	
Partition coefficient n-octanol/water (Log Kow)	1.77 (20 °C)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).
Propane (74-98-6)	
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

### 12.4. Mobility in soil

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

Regional legislation (waste)	Disposal must be done according to official regulations.
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

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ADR	IMDG	IATA	RID
<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			

### 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

#### 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

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### 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

### 15.2. International agreements

No additional information available

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	General		
1	Use of the substance/mixture	Added	
2.1	Classification (GHS AU)	Modified	
2.2	Hazard pictograms (GHS AU)	Added	
2.2	Precautionary statements (GHS AU)	Modified	
8	Occupational Exposure Limit	Added	
8.2	Personal protective equipment	Modified	
9	Physical and chemical properties	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

### Revision date

31/03/2023

Classification	
Flam. Gas 1A	H220
Press. Gas (Comp.)	H280

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 AU 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.