

# GC 21

## Safety Data Sheet

according to the Model Work Health and Safety Regulations

Issue date: 16/09/2021

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Supersedes: 21/09/2016

Version: 23.2

### SECTION 1: Product identifier

#### 1.1. Product identifier

Product form	Mixture
Product name	GC 21
Product code	BU Direct Fastening



#### 1.2. Other means of identification

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

Recommended use	Propellant for direct fastening tools. Gas can for use exclusively with the Hilti GX 120 tool.
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#### 1.4. Supplier's details

**Supplier**  
Hilti (Aust.) Pty. Ltd.  
Level 5, 1G Homebush Bay Drive  
P.O. Box 3217  
2138 Rhodes NSW - 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  
86916 Kaufering - Deutschland  
T +49 8191 906876  
[anchor.hse@hilti.com](mailto:anchor.hse@hilti.com)

#### 1.5. Emergency phone number

Emergency number	+61 2 8748 1000
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### SECTION 2: Hazards identification

#### 2.1. Classification of the hazardous chemical

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

Flammable aerosols, Category 1	H222
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#### 2.2. Label elements

Hazard pictograms (GHS AU)



Signal word (GHS AU)  
Hazard statements (GHS AU)  
Precautionary statements (GHS AU)

Danger  
H222 - Extremely flammable aerosol.  
P102 - Keep out of reach of children.  
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 - Do not pierce or burn, even after use.  
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

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Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
Isobutane	75-28-5	70 - <80	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propene	115-07-1	10 - <20	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Propane	74-98-6	5 – 10	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Butane	106-97-8	2.5 – 5	Flam. Gas 1, H220 Press. Gas (Comp.), H280

### SECTION 4: First aid measures

#### 4.1. Description of 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. If skin irritation or rash occurs: Get medical advice/attention.
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 immediate medical advice/attention.
First-aid measures after ingestion	Get immediate medical advice/attention.

#### 4.2. Symptoms caused by exposure

Symptoms/effects after inhalation	Shortness of breath.
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#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry powder. Foam. Sand.
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	Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
General measures	Evacuate area. No flames, no sparks. Eliminate all sources of ignition.
Hazardous decomposition products in case of fire	Formation of toxic gases is possible during heating or in case of fire. 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.

### SECTION 6: Accidental release measures

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

General measures	Evacuate area. No flames, no sparks. Eliminate all sources of ignition.
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##### 6.1.1. For non-emergency personnel

Emergency procedures	Ventilate spillage area. Avoid breathing vapours. Evacuate unnecessary personnel.
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### 6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. Breathing apparatus.  
 Emergency procedures Ventilate area.

### 6.2. Environmental precautions

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

### 6.3. Methods and material 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 Hazardous waste due to potential risk of explosion. Do not pierce or burn, even after use.  
 Precautions for safe handling Do not eat, drink or smoke when using this product. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 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. Do not expose to temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place.  
 Incompatible materials Heat sources. Direct sunlight.  
 Storage temperature 5 – 25 °C  
 Heat and ignition sources Keep away from heat and direct sunlight.  
 Information on mixed storage Do not store with DX powder cartridges.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters - exposure standards

GC 21	
<b>Australia - Occupational Exposure Limits</b>	
Local name	Butane
OES TWA [1]	1900 mg/m <sup>3</sup>
OES TWA [2]	800 ppm
Regulatory reference	Workplace exposure standards for airborne contaminants (2019)
<b>Butane (106-97-8)</b>	
<b>Australia - Occupational Exposure Limits</b>	
Local name	Butane
OES TWA [1]	1900 mg/m <sup>3</sup>
OES TWA [2]	800 ppm
Regulatory reference	Workplace exposure standards for airborne contaminants (2019)

### 8.2. Monitoring

No additional information available

### 8.3. Appropriate engineering controls

Appropriate engineering controls Ensure good ventilation of the work station.

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### 8.4. Personal protective equipment

Hand protection In case of repeated or prolonged contact wear gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,4		EN ISO 374

Eye protection Chemical goggles or safety glasses. EN 166. EN 170

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

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

Personal protective equipment symbol(s)



### SECTION 9: Physical and chemical properties

Physical state	Gas
Appearance	aerosol.
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	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 (solid, gas)	No data available
Vapour pressure	Vapour pressure : 3000 hPa
Relative density	No data available
Density	Density : 0.56 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

### SECTION 10: Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	No additional information available
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	Carbon dioxide. Carbon monoxide.

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### SECTION 11: Toxicological information

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

#### Butane (106-97-8)

LC50 Inhalation - Rat [ppm]	276798.8 ppm
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

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Vaporizer	Container fitted with a sealed spray attachment
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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

Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified

#### Isobutane (75-28-5)

LC50 - Fish [1]	27.98 mg/l (ECOSAR v1.00, 96 h, Pisces, Fresh water, QSAR)
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (Experimental value, 20 °C)

#### propene (115-07-1)

ErC50 algae	33.39 mg/l
Partition coefficient n-octanol/water (Log Pow)	1.77 (Experimental value, 20 °C)

#### Butane (106-97-8)

Partition coefficient n-octanol/water (Log Pow)	2.8 (Experimental value, 20 °C)
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#### 12.2. Persistence and degradability

##### Isobutane (75-28-5)

Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

##### propene (115-07-1)

Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
ThOD	3.43 g O <sub>2</sub> /g substance

##### Propane (74-98-6)

Not rapidly degradable	
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<b>Propane (74-98-6)</b>	
Persistence and degradability	Readily biodegradable in water.
<b>Butane (106-97-8)</b>	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.

### 12.3. Bioaccumulative potential

<b>Isobutane (75-28-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>propene (115-07-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.77 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Propane (74-98-6)</b>	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>Butane (106-97-8)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.8 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

<b>Isobutane (75-28-5)</b>	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (Experimental value, 20 °C)
Ecology - soil	Not applicable (gas).
<b>propene (115-07-1)</b>	
Surface tension	20 mN/m (-50 °C)
Partition coefficient n-octanol/water (Log Pow)	1.77 (Experimental value, 20 °C)
Ecology - soil	Not applicable (gas). May be harmful to plant growth, blooming and fruit formation.
<b>Propane (74-98-6)</b>	
Surface tension	No data available in the literature
Ecology - soil	Not applicable (gas).
<b>Butane (106-97-8)</b>	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	2.8 (Experimental value, 20 °C)
Ecology - soil	Not applicable (gas).

### 12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

<b>GC 21</b>	
Fluorinated greenhouse gases	False
<b>Isobutane (75-28-5)</b>	
Fluorinated greenhouse gases	False
<b>propene (115-07-1)</b>	
Fluorinated greenhouse gases	False
<b>Propane (74-98-6)</b>	
Fluorinated greenhouse gases	False
<b>Butane (106-97-8)</b>	
Fluorinated greenhouse gases	False

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### 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</b>			
UN 1950	UN 1950	UN 1950	UN 1950
<b>14.2. UN proper shipping name</b>			
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
<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			

### 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
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

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### Air transport

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

### 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

Hazchem Code Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals (AICIS Inventory) status All the chemicals contained in this product are listed introductions

### 15.2. International agreements

No additional information available

## SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
2.2	Hazard statements (GHS AU)	Modified	
15.1	Additional information	Added	
16	Additional information	Added	

Abbreviations and acronyms

CAS-No. - Chemical Abstract Service number  
 ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 ATE - Acute Toxicity Estimate  
 IATA - International Air Transport Association  
 IMDG - International Maritime Dangerous Goods  
 OEL - Occupational Exposure Limit  
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
 SDS - Safety Data Sheet  
 EN - European Standard  
 LC50 - Median lethal concentration  
 BOD - Biochemical oxygen demand (BOD)  
 ThOD - Theoretical oxygen demand (ThOD)

Revision date

16/09/2021

Classification:

Flam. Aerosol 1	H222
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Full text of H-statements:

Flam. Aerosol 1	Flammable aerosols, Category 1
Flam. Gas 1	Flammable gases, Category 1



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Press. Gas (Comp.)	Gases under pressure : Compressed gas
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
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.*