

GC 21

Safety Data Sheet

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

Date of issue: 20/03/2018

Revision date: 20/03/2018

Supersedes: 01/11/2014

Version: 1.1

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

Product identifier

Product name GC 21
Product form Mixture
Type of product Aerosol
Product code BU Direct Fastening



Other means of identification

No additional information available

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

Recommended use Propellant for direct fastening tools.
Gas can for use exclusively with the Hilti GX 120 tool.

Supplier's details

Supplier

Hilti (New Zealand) Ltd.
525 Great South Road
1050 Penrose
P.O. Box 112-030 Penrose
1061 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 Entwicklungsgesellschaft mbH
Hiltistrasse 6
86916 Kaufering - Deutschland
T +49 8191 906310 - F +49 8191 90176310
df-hse@hilti.com

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

AERO-1

2.1.2A: Aerosol 1

2.2. Label elements

Hazard pictograms (GHS NZ)



GHS02

Signal word (GHS NZ)

Danger

Hazard statements (GHS NZ)

H222 - Extremely flammable aerosol.

Precautionary statements (GHS NZ)

P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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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

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 the United Nations GHS (Rev. 4, 2011)
Isobutane	(CAS-No.) 75-28-5	70 - <80	2.1.1A: Flam. Gas 1, H220 Press. Gas (Comp.), H280
propene	(CAS-No.) 115-07-1	10 - <20	2.1.1A: Flam. Gas 1, H220 Press. Gas (Comp.), H280 9.1D: Aquatic Acute 3, H402 9.1C: Aquatic Chronic 3, H412
Propane	(CAS-No.) 74-98-6	5 - 10	2.1.1A: Flam. Gas 1, H220 Press. Gas (Comp.), H280
Butane	(CAS-No.) 106-97-8	2.5 - 5	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	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. Most important symptoms and effects, both acute and delayed

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

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.
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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.
Reactivity	The product is non-reactive under normal conditions of use, storage and transport

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.
6.1.1. For non-emergency personnel	
Emergency procedures	Ventilate spillage area. Avoid breathing vapours. Evacuate unnecessary personnel.
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.
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SECTION 7: Handling and storage, including how the chemical may be safely used

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.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propene (115-07-1)		
New Zealand	Local name	Propylene
New Zealand	Remark (NZ)	Simple asphyxiant – may present an explosion hazard
New Zealand	Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 8th Edition
Propane (74-98-6)		
New Zealand	Local name	Propane
New Zealand	Remark (NZ)	Simple asphyxiant – may present an explosion hazard
New Zealand	Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 8th 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)

No additional information available

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 374

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

Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

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



SECTION 9: Physical and chemical properties

Physical state	Gas
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	No data available
Boiling point	No data available

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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 ³ (DIN 51757)
Solubility	insoluble in water.
Log Pow	No data available
Viscosity	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

SECTION 10: Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport. The product is non-reactive under normal conditions of use, storage and transport
Conditions to avoid	Heat. Sparks. Open flame. Direct sunlight. Overheating.
Hazardous decomposition products	Carbon dioxide. Carbon monoxide.

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

Isobutane (75-28-5)	
LC50 inhalation rat (mg/l)	1443 mg/l (15 minutes, Rat, Male/female, Experimental value)
LC50 inhalation rat (ppm)	11000 ppm
propene (115-07-1)	
LC50 inhalation rat (mg/l)	658 mg/l (4 h, Rat, Literature)
Propane (74-98-6)	
LC50 inhalation rat (ppm)	> 800000 ppm (15 minutes, Rat, Male/female, Experimental value)

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

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified
Soil toxicity	Not classified
Terrestrial vertebrate toxicity	Not classified
Terrestrial invertebrate toxicity	Not classified

Isobutane (75-28-5)	
EC50 72h algae (1)	7.15 mg/l (Algae, QSAR)
BCF fish 1	20 - 52 (Pisces, QSAR)
Log Pow	2.8 (Experimental value, 20 °C)
propene (115-07-1)	
ErC50 (algae)	33.39 mg/l
ErC50 (algae)	33.39 mg/l
Log Pow	1.77 (Experimental value)
Butane (106-97-8)	
EC50 72h algae (1)	5.3 - 5.5 mg/l (Algae, QSAR)
Log Pow	2.89 (Experimental value)

12.2. Persistence and degradability

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Persistence and degradability	No additional information available
Isobutane (75-28-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
propene (115-07-1)	
Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water. Inherently biodegradable.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
ThOD	3.43 g O ₂ /g substance
BOD (% of ThOD)	0 (5 day(s), Literature study)
Propane (74-98-6)	
Persistence and degradability	Readily biodegradable in water.
Butane (106-97-8)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

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Bioaccumulative potential	
Isobutane (75-28-5)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
propene (115-07-1)	
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Propane (74-98-6)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Butane (106-97-8)	
Log Pow	See section 12.1 on ecotoxicology

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Butane (106-97-8)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

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Mobility in soil	No additional information available

Isobutane (75-28-5)	
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	Not applicable (gas).

propene (115-07-1)	
Surface tension	0.02 N/m (-50 °C)
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.

Propane (74-98-6)	
Surface tension	0.016 N/m (-47 °C)
Ecology - soil	Not applicable (gas).

Butane (106-97-8)	
Surface tension	< 0.1 N/m (0 °C)
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	Not applicable (gas).

12.5. Other adverse effects

Ozone	Not classified
GWPmix comment	No known effects from this product.
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 / IATA / IMDG / RID

Other information	No supplementary information available
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ADR Regulatory status: Regulated
 IMDG Regulatory status: Regulated
 IATA Regulatory status: Regulated
 RID Regulatory status: Regulated

ADR	IMDG	IATA	RID
14.1. UN number			
1950	1950	1950	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		
14.3. Transport hazard class(es)			
2.1	2.1	2.1	2.1

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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)	1I
Packing instructions (ADR)	P207, LP02
Mixed packing provisions (ADR)	MP9
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
Stowage and segregation (IMDG)	Protected from sources of heat For AEROSOLS with a maximum capacity of 1 litre: Category A. Segregation as for class 9 but 'Separated from' class 1 except division 1.4. For AEROSOLS with a capacity above 1 litre: Category B. Segregation as for the appropriate sub-division of class 2. For WASTE AEROSOLS: Category C. Clear of living quarters. Segregation as for the appropriate sub-division of class 2.
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

- Rail transport

Special provisions (RID)	190, 327, 344, 625
Limited quantities (RID)	1L
Packing instructions (RID)	P207, LP02
Carriage prohibited (RID)	No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

HSNO Approval Number HSR002515

15.2. 15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

SDS Major/Minor None
Date of issue 20/03/2018
Revision date 20/03/2018
Supersedes 01/11/20140

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
9.1C: Aquatic Chronic 3	9.1C: Hazardous to the aquatic environment — Chronic Hazard, Category 3
9.1D: Aquatic Acute 3	9.1D: Hazardous to the aquatic environment — Acute Hazard, Category 3
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.
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects.

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