

# GC 42

## Safety Data Sheet

according to ICOP 2014,2019

Issue date: 14/12/2022

Revision date: 14/12/2022

Supersedes: 20/03/2017

Version: 2.0

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

#### 1.1. Product identifier

Name

GC 42



#### 1.2. Other means of identification

Product code

BU Direct Fastening

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

Recommended use

For professional use only  
Propellant for direct fastening tools.

#### 1.4. Supplier details

##### Supplier

Hilti (Malaysia) Sdn. Bhd.  
F-5-A, Sime Darby Brunfield Tower, No. 2, Jalan PJU 1A/7A  
Oasis Square, Oasis Damansara  
47301 Petaling Jaya, Selangor  
Malaysia  
T +60 3 5628 7222  
; 1800 880 985 toll free - F +60 3 7848 7399

##### 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](mailto:df-hse@hilti.com)

#### 1.5. Emergency phone number

Emergency number

Schweizerisches Toxikologisches Informationszentrum – 24h Service  
+41 44 251 51 51 (international)  
+60 3 5628 7222  
; 1800 880 985 toll free

### SECTION 2: Hazards identification

#### 2.1. Classification of the hazardous chemical

##### Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Flammable gases, Category 1

H220

Gases under pressure : Compressed gas

H280

#### 2.2. Label elements

##### Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)

Hazard pictograms (GHS MY)



Signal word (GHS MY)

Danger

Hazard statements (GHS MY)

H220 - Extremely flammable gas

H280 - Contains gas under pressure; may explode if heated

Precautionary statements (GHS MY)

P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking

P211 - Do not spray on an open flame or other ignition source

P251 - Pressurized container: Do not pierce or burn, even after use

P381 - Eliminate all ignition sources if safe to do so

P403 - Store in a well-ventilated place

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

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### 2.3. Other hazards that do not result in 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	%	Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)
isobutane	CAS-No.: 75-28-5	55 - <65	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propene	CAS-No.: 115-07-1	20 - <30	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propane	CAS-No.: 74-98-6	5 - <15	Flam. Gas 1, 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. Most important symptoms/effects, acute and delayed

No additional information available

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

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

### 5.1. Suitable 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. Physicochemical hazards arising from the chemical

Explosion hazard	Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
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.
EAC code	2YE
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.
<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.

### 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.
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.
Storage temperature	5 – 25 °C

### SECTION 8: Exposure controls and personal protection

#### 8.1. Control parameters

<b>GC 42</b>	
<b>Malaysia - Occupational Exposure Limits</b>	
Local name	Propana # Propane
PEL (OEL TWA) [2]	2500 ppm
MEL (ppm)	7500 ppm
<b>propane (74-98-6)</b>	
<b>Malaysia - Occupational Exposure Limits</b>	
Local name	Propana # Propane
PEL (OEL TWA) [2]	2500 ppm
MEL (ppm)	7500 ppm

#### Exposure limit values for the other components

No additional information available

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### 8.1.1 Biological monitoring

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls Ensure good ventilation of the work station.

### 8.3. Individual protection measures, such as 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. EN 166. 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

#### 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
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Extremely flammable aerosol,Extremely flammable gas.
Explosive limits	Upper explosion limit: 11.1 vol % Lower explosion limit: 1.7 vol %
Vapour pressure	Vapour pressure: 8300 hPa
Relative vapour density at 20°C	No data available
Relative density	No data available
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available

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Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Density	0.6 g/cm <sup>3</sup> (DIN 51757)
Gas group	Gases under pressure : Compressed gas

### SECTION 10: Stability and reactivity

Reactivity	No data 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 data available
Conditions to avoid	Heat, Sparks, Open flame, Direct sunlight, Overheating
Incompatible materials	No data available
Hazardous decomposition products	No data available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

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)

<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 or irritation	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage or eye irritation	Not classified (Based on available data, the classification criteria are not met)
Respiratory sensitization	Not classified (Based on available data, the classification criteria are not met)
Skin sensitization	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)
Specific target organ toxicity (STOT) – single exposure	Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (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)

<b>GC 42</b>	
Vaporizer	Container fitted with a sealed spray attachment

Potential adverse human health effects and symptoms	No additional information available.
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### SECTION 12: Ecological information

#### 12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified (Based on available data, the classification criteria are not met)
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Hazardous to the aquatic environment, long-term (chronic)	Not classified (Based on available data, the classification criteria are not met)
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

GC 42	
Persistence and degradability	No additional information available

isobutane (75-28-5)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable.

propene (115-07-1)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.

propane (74-98-6)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.

### 12.3. Bioaccumulative potential

GC 42	
Bioaccumulative potential	No additional information available

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

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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)

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<b>propene (115-07-1)</b>	
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 information

### 13.1. Disposal methods

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: Transportation 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			

### 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

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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 hazardous chemical in question

Regulation	Component/ Mixture
EHS Notification and Registration Scheme	
Environmental Quality (Chlorofluorocarbons Prohibition) Order 1993	Not applicable
Environmental Quality (Industrial Effluent) Regulations 2009	GC 42
Environmental Quality (Scheduled Wastes) Regulations 2007	GC 42



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Control of Industrial Major Accident Hazards Regulations 1996		GC 42
Prohibition of Use of Substance Order 1999		GC 42
Use and Standards of Exposure of Chemical Hazardous to Health Regulations 2000		GC 42
Chemical Weapons Convention Act		GC 42
Corrosive and Explosive Substances and Offensive Weapons Act		GC 42
Dangerous Drugs Act		GC 42
Pesticides Act		GC 42
Petroleum (Safety Measures) Act	List of petroleum	Propane
Poisons Act 1952	Not applicable	GC 42
Poisons (Psychotropic Substances) Regulations 1989		GC 42

### 15.2. International agreements

No additional information available

## SECTION 16: Other information

Version	2.0
Issue date	14/12/2022
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Indication of changes			
Section	Changed item	Change	Comments
	General	Modified	
1.2	Use of the substance/mixture	Modified	
8.2	Personal protective equipment	Modified	
9	Physical and chemical properties	Modified	
11	Toxicological information	Modified	
12.	Ecotoxicological information	Modified	
15	Regulatory information	Added	

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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 1	Flammable gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

### SDS MY 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.