

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

Issue date: 27/06/2023

Revision date: 27/06/2023

Supersedes: 22/03/2017

Version: 2.0

SECTION 1: Identification

1.1. GHS Product identifier

Product form Mixture
Name GC 42
UN-No. (ADR) 3150
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. Supplier's details

Supplier

Hilti Saudi Arabia for Construction Tools LLC
King Fahd Street
P.O. Box 15930
SA- 21454 Jeddah
Saudi Arabia
T +966 2 213 8400 - F +966 2 697 4696
sa.customerservice@hilti.com

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
FL- 9494 Schaan
Liechtenstein
T +423 234 2111
df-hse@hilti.com

1.5. Emergency phone number

Emergency number Emergency contact (24 hours per day)
GBK GmbH Global Regulatory Compliance +49 (0)6132-84463

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

| | | |
|---|------|------------------|
| Flammable gases, Category 1A | H220 | Expert judgement |
| Gases under pressure : Compressed gas | H280 | Expert judgement |
| Full text of H-statements: see section 16 | | |

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



Signal word (GHS UN)

Danger

Hazard statements (GHS UN)

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

Precautionary statements (GHS UN)

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

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/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to the United Nations GHS |
|-----------|--------------------|----------|--|
| 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 |

Full text of H-statements: see section 16

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

| | |
|---|---|
| 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. |
|---|---|

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

Treat symptomatically.

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. Specific 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. |

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

5.3. Special protective actions for fire-fighters

| | |
|--------------------------------|---|
| Precautionary measures fire | Fight fire remotely due to the risk of explosion. |
| 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. |

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. |
| Other information | For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13. |

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|---|
| 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. |
| 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. |

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/personal protection

8.1. Control parameters

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 personal protective equipment (PPE)

| | |
|-----------------|--|
| Hand protection | In case of repeated or prolonged contact wear gloves |
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GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

| 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

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|---|
| Physical state | Gas |
| Colour | Colourless. |
| Odour | Sweet. |
| Odour threshold | Not available |
| Melting point | Not applicable |
| Freezing point | Not applicable |
| Boiling point | Not available |
| Flammability | Extremely flammable aerosol, Extremely flammable gas. |
| Lower explosion limit | 1.7 vol % |
| Upper explosion limit | 11.1 vol % |
| Flash point | Not applicable |
| Auto-ignition temperature | Not available |
| Decomposition temperature | Not available |
| pH | Not applicable |
| pH solution | Not applicable |
| Viscosity, kinematic (calculated value) (40 °C) | Not applicable |
| Partition coefficient n-octanol/water (Log Kow) | Not available |
| Vapour pressure | 8300 hPa |
| Vapour pressure at 50°C | Not available |
| Density | 0.6 g/cm ³ (DIN 51757) |
| Relative density | Not applicable |
| Relative vapour density at 20°C | Not available |
| Solubility | insoluble in water. |
| Particle size | Not applicable |

9.2. Data relevant with regard to physical hazard classes (supplemental)

| | |
|----------------------|---|
| Explosive properties | Product is not explosive. In use, may form flammable/explosive vapour-air mixture |
| Gas group | Gases under pressure : Compressed gas |

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. 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.

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Overheating.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information 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) |

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

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

| 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 (Based on available data, the classification criteria are not met) |

| GC 42 | |
|-----------|---|
| 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. |
|---|--|

SECTION 12: Ecological information

12.1. Toxicity

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

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

| 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)) |
| 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)) |
| EC50 96h - Algae [1] | 12.1 mg/l (algae; Quantitative structure-activity relationship (QSAR)) |

12.2. Persistence and degradability

| GC 42 | |
|-------------------------------|-------------------------------------|
| Persistence and degradability | No additional information available |
| 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. |

12.3. Bioaccumulative potential

| GC 42 | |
|---|--|
| Bioaccumulative potential | No additional information available |
| isobutane (75-28-5) | |
| Partition coefficient n-octanol/water (Log Kow) | 1.09 – 2.8 (20 °C) |
| Bioaccumulative potential | Bioaccumulation unlikely. |
| propene (115-07-1) | |
| Partition coefficient n-octanol/water (Log Pow) | 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

| GC 42 | |
|------------------|-------------------------------------|
| Mobility in soil | No additional information available |

12.5. Other adverse effects

| | |
|-----------------------|-------------------------------------|
| Ozone | Not classified |
| Other adverse effects | No additional information available |
| Other information | Avoid release to the environment. |

SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|------------------------------|--|
| Regional legislation (waste) | Disposal must be done according to official regulations. |
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GC 42





Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

| | |
|--|---|
| 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 |
|---|---|--|---|
| 14.1. UN number or ID number | | | |
| UN 3150 | UN 3150 | UN 3150 | UN 3150 |
| 14.2. UN proper shipping name | | | |
| HYDROCARBON GAS REFILLS FOR SMALL DEVICES | HYDROCARBON GAS REFILLS FOR SMALL DEVICES | Hydrocarbon gas Refills for small devices | HYDROCARBON GAS REFILLS FOR SMALL DEVICES |
| Transport document description | | | |
| 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 |
| 14.3. Transport hazard class(es) | | | |
| 2.1 | 2.1 | 2.1 | 2.1 |
|  |  |  |  |
| 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) | 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 |

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

| | |
|-----------------------------|-----|
| 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

SECTION 16: Other information

| | |
|-----------------|------------|
| SDS Major/Minor | None |
| Issue date | 27/06/2023 |
| Revision date | 27/06/2023 |
| Supersedes | 22/03/2017 |

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

GC 42

Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

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

SDS UN 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.