

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name: Hilti GC11**
- **Relevant identified uses of the substance or mixture and uses advised against**
Gas can for use exclusively with the Hilti GX 100 tool.
- **Application of the substance / the preparation** Propellant for direct fastening tools.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Hilti, Inc.
Segment on the 2nd, 4th Floor,
Taipei, Taiwan 2
Taiwan 100
Tel 0800-221036
Fax 02-2397-3730
E-mail: twcs@hilti.com
- **Informing department:**
df-hse@hilti.com
see section 16
- **Emergency telephone number:**
Schweizerisches Toxikologisches Informationszentrum - 24 h Service
Tel.: 0041 / 44 251 51 51 (international)
- Hilti, Inc.
Tel 0800-221036
Fax 02-2397-3730

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



F+; Extremely flammable

R12: Extremely flammable.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**
P102 Keep out of reach of children.
P251 Pressurized container: Do not pierce or burn, even after use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 Do not spray on an open flame or other ignition source.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

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














- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**

Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

115-10-6	dimethyl ether	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	25-<50%
115-07-1	propene	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	25-<50%
75-28-5	isobutane	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	12,5-<20%
64-17-5	ethanol	 F R11  Flam. Liq. 2, H225	12,5-<20%
74-98-6	propane liquefied	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	10-<12,5%
106-97-8	butane, pure	 F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	5-<10%

· **Additional information**

Gas can with 2 chambers:

1. Propane / butane (pressure gas) - remains in the can after use
 2. Isobutane, dimethylether, ethanol, propylene, mineral oil (active agent), Buta-1,3-diene content less than 0,1%
- For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation**
Take affected persons into the open air and position comfortably
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly. If skin irritation persists, call a physician.
- **After eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- **After swallowing** Seek immediate medical advice.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Water spray, carbon dioxide (CO₂), carbon dioxide blanket, foam, or dry powder.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**
Burning produces irritant fumes
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
- **Advice for firefighters**
- **Protective equipment:**
In the event of fire, wear self contained breathing apparatus

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EN 12941 / EN 12942

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Bring persons out of danger.
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
Keep away from ignition sources
- **Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Keep away from heat and direct sunlight.
Provide sufficient air exchange and/or exhaust in work rooms. When using, do not eat, drink or smoke. Ingestion, exposure to skin and eyes and inhalation of any general vapours should be avoided.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Do not spray on flames or red-hot objects.
Protect against electrostatic charges.
Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Keep in a cool, dry and dark place; 5 °C to 25 °C.
Keep out of reach of children. Keep containers dry and tightly closed to avoid moisture absorption and contamination.
- **Information about storage in one common storage facility:**
Do not store with DX powder cartridges.
Store away from foodstuffs.
- **Further information about storage conditions:**
Do not transport in the passenger compartment or cabin of a motor vehicle.
Protect from heat and direct sunlight.
- **Storage class 2 B**
- **Specific end use(s)** Gas can for use exclusively with the Hilti GX 100 tool.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

64-17-5 ethanol

PEL (Taiwan) | Long-term value: 1880 mg/m³, 1000 ppm

74-98-6 propane liquefied

PEL (Taiwan) | Long-term value: 1800 mg/m³, 1000 ppm

106-97-8 butane, pure

PEL (Taiwan) | Long-term value: 1900 mg/m³, 800 ppm

- **Additional information:** The lists that were valid during the compilation were used as basis.

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- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke while working.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
EN 374

- **Material of gloves**
Butyl rubber, BR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Safety glasses

EN 166 / EN 170

- **Body protection:**



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

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
· Form:	Aerosol
· Colour:	Colourless
· Odour:	Characteristic
· Odour threshold:	Not determined.
· pH-value: Not applicable	
· Change in condition	
· Melting point/Melting range:	Not applicable
· Boiling point/Boiling range:	Not applicable, as aerosol
· Flash point: Not applicable, as aerosol	
· Inflammability (solid, gaseous) Not applicable.	
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Self-inflammability: Product is not selfigniting.	
· Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible.	

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· Critical values for explosion:	
Lower:	1,7 Vol %
Upper:	18,6 Vol %
· Vapour pressure at 20 °C:	8300 hPa
· Density at 20 °C	1,02 g/cm ³ (DIN 51757)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
EU-VOC [g/l]	1018,6 g/l
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Danger of bursting
 - Reacts with oxidizing agents
 - Forms explosive gas mixture with air
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
 - Do not inhale vapours, aerosol or spray. The inhalation of large quantities of the gasses can lead to narcotic effects. Long periods of exposure or repeated exposure can present a health hazard.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** None

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** Not determined
- **Additional ecological information:**
- **General notes:**
 - Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
For disposal, local regulations issued by the authorities must be observed.
Hand over to disposers of hazardous waste.
Use the entire contents of the can. Pressurizing gas and a small quantity of combustible liquefied gas remains in the can after use.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
14 06 03*	other solvents and solvent mixtures
16 05 04*	gases in pressure containers (including halons) containing dangerous substances
15 01 04	metallic packaging

- **Uncleaned packagings:**
- **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA** UN1950
- **UN proper shipping name**
- **ADR** UN1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, flammable

· **Transport hazard class(es)**

· **ADR**



- **Class** 2 5F Gases.
- **Label** 2.1

· **IMDG, IATA**



- **Class** 2.1
- **Label** 2.1

· **Packing group**

- **ADR, IMDG, IATA** Void

· **Environmental hazards:**

- **Marine pollutant:** No

- **Special precautions for user** Warning: Gases.
- **Kemler Number:** -
- **EMS Number:** F-D,S-U

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

- **ADR**
- **Limited quantities (LQ)** 1L

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· Transport category	2
· Tunnel restriction code	D

· IMDG	
· Remarks:	LQ 1L
· UN "Model Regulation":	UN1950, UN1950 AEROSOLS, 2.1

15 Regulatory information

- Chemical safety assessment: not required.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.

R11 Highly flammable.

R12 Extremely flammable.

· Department issuing data specification sheet:

Hilti Entwicklungsgesellschaft mbH

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· Contact: Mechthild Krauter

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

- * Data compared to the previous version altered.