

## 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 mixture** Propellant for direct fastening tools.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Hilti (Thailand) Ltd.  
No. 1858/107-108, 24th Floor, TCIF Tower,  
Bangna-Trad Road,  
Kweang Bangna, Khet Bangna,  
TH-Bangkok 10260  
Tel +66 2 714 5300  
Fax +66 2 714 5399
- **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 (Thailand) Ltd.  
Tel +66 2 714 5300  
Fax +66 2 714 5399

## 2 Hazards identification

- **Classification of the substance or mixture**



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**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).

- **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.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

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· **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 (CO<sub>2</sub>), 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 (CO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>)

· **Advice for firefighters**

· **Protective equipment:**

In the event of fire, wear self contained breathing apparatus

EN 12941 / EN 12942

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## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Remove persons from danger area.
  - 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:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **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.

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· **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:**

· <b>Form:</b>	Aerosol
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable

· **Change in condition**

· <b>Melting point/Melting range:</b>	Not applicable
· <b>Boiling point/Boiling range:</b>	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.

· **Critical values for explosion:**

· <b>Lower:</b>	1,7 Vol %
· <b>Upper:</b>	18,6 Vol %

· **Vapour pressure at 20 °C:** 8300 hPa

· **Density at 20 °C** 1,02 g/cm<sup>3</sup> (DIN 51757)

· **Relative density** Not determined.

· **Vapour density** Not determined.

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- |   |  |
|---|--|
| · <b>Evaporation rate</b>                         | Not applicable.                            |
| · <b>Solubility in / Miscibility with Water:</b>  | Not miscible or difficult to mix           |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| · <b>Viscosity:</b>                               |  |
| · <b>dynamic:</b>                                 | Not determined.                            |
| · <b>kinematic:</b>                               | Not determined.                            |
| · <b>Other information</b>                        | 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.
- **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.

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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  
 · **Transport category** 2  
 · **Tunnel restriction code** D

· **IMDG**

· **Remarks:** LQ 1L

· **UN "Model Regulation":** UN1950, UN1950 AEROSOLS, 2.1

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 \* **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

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)

- **\* Data compared to the previous version altered.**

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