

## 1 Identification

- **Product identifier**
- **Trade name:** **Hilti GC12**
- **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.  
5400 South 122nd East Ave.  
US-Tulsa, OK 74146  
Phone: (800) 879-8000  
Fax: (800) 879-7000  
Español: (800) 879-5000
- **Information department:**  
df-hse@hilti.com  
see section 16
- **Emergency telephone number:**  
Chem-Trec  
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)  
Tel.: 703 527 3887 (Other countries)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode 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.
- **Classification system:**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- **Label elements**

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

- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**  
H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode 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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- **Classification system**
- **NFPA ratings (scale 0-4)**



Health = 1  
Fire = 4  
Reactivity = 0

- **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 nonhazardous additions.

- **Dangerous components:**

75-28-5	isobutane	F+ R12 H220; H280	25-<50%
115-10-6	dimethyl ether	F+ R12 H220; H280	20-<25%
115-07-1	propene	F+ R12 H220; H280	12.5-<20%
74-98-6	propane liquefied	F+ R12 H220; H280	12.5-<20%
64-17-5	ethanol	F R11 H225	5-<10%
106-97-8	butane, pure	F+ R12 H220; H280	2.5-<5%

- **Additional information**

Gas can with 2 chambers:

1. Propane (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** Immediately remove any clothing soiled by the product.
- **After inhalation**  
Take affected persons into fresh air and keep quiet.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **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 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
Can form explosive gas-air mixtures.

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- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
EN 12941 / EN 12942

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Remove persons from danger area.  
Ensure adequate ventilation  
Keep away from ignition sources
- **Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**  
Allow to evaporate.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
Dispose 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 disposal information.

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling**  
Keep away from heat and direct sunlight.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**  
Don't spray on a naked flames or any incandescent material  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Contents under pressure. Do not store in direct sunlight. Do not store above 100°F. Do not open or burn even after use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Keep in a cool, dry and dark place; 41 °F / 5 °C to 77 °F / 25 °C.  
Observe official regulations on storing packagings with pressurized containers.
- **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 A**
- **Specific end use(s)** Gas can for use exclusively with the Hilti GX 100 tool.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:****75-28-5 isobutane**TLV Short-term value: 2370 mg/m<sup>3</sup>, 1000 ppm**115-10-6 dimethyl ether**

WEEL Long-term value: 1000 ppm

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**115-07-1 propene**

 TLV Long-term value: 860 mg/m<sup>3</sup>, 500 ppm

**74-98-6 propane liquefied**

 PEL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm

 REL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm

TLV refer to Appendix F: minimal oxygen content

**64-17-5 ethanol**

 PEL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

 REL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

 TLV Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

**106-97-8 butane, pure**

 REL Long-term value: 1900 mg/m<sup>3</sup>, 800 ppm

 TLV Short-term value: 2370 mg/m<sup>3</sup>, 1000 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Do not eat, drink, smoke or sniff while working.

Wash hands before breaks and at the end of work.

· **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 / EN 388

· **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:** Gaseous

**Color:** Colorless

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· <b>Odor:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Not determined.
<b>Boiling point/Boiling range:</b>	Not applicable
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous)</b>	Not applicable
· <b>Ignition temperature:</b>	Not determined
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	18.6 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	8300 hPa (6226 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	0.67 g/cm <sup>3</sup> (5.591 lbs/gal) (DIN 51757)
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <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
  - Nitrogen oxides (NO<sub>x</sub>)

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects 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.

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 · **Carcinogenic categories**

 · **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

 · **NTP (National Toxicology Program)**

None of the ingredients is listed.

**12 Ecological information**

 · **Toxicity**

 · **Aquatic toxicity:** No further relevant information available.

 · **Persistence and degradability** No further relevant information available.

 · **Behavior 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:** Generally not hazardous for water.

 · **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.

Use the entire contents of the can. The pressure gas (propane / butane) remains in the can.

Hand over to hazardous waste disposers.

 · **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**

 · **DOT, ADR, IMDG, IATA** UN3150

 · **UN proper shipping name**

 · **DOT** Hydrocarbon gas refills for small devices

 · **ADR** UN3150 Hydrocarbon gas refills for small devices

 · **IMDG, IATA** HYDROCARBON GAS REFILLS FOR SMALL DEVICES

 · **Transport hazard class(es)**

 · **DOT**

 · **Class** 2.1

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 · **Label** 2.1

 · **ADR**

 · **Class** 2 6F Gases

 · **Label** 2.1

 · **IMDG, IATA**

 · **Class** 2.1

 · **Label** 2.1

 · **Packing group**

 · **DOT, ADR, IMDG** Void

 · **Environmental hazards:**

 · **Marine pollutant:** No

 · **Special precautions for user** Warning: Gases

 · **Danger code (Kemler):** 23

 · **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:**

 · **DOT** Limited Quantity - LQ

 · **Item:**

 · **UN "Model Regulation":** UN3150, UN3150 Hydrocarbon gas refills for small devices, 2.1

**15 Regulatory information**

 · **Safety, health and environmental regulations/legislation specific for the substance or mixture**

 · **Sara**

 · **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

 · **Section 313 (Specific toxic chemical listings):**

115-07-1 propene

 · **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

 · **Proposition 65:**

 · **Chemicals known to cause cancer:**

None of the ingredients are listed.

 · **Carcinogenicity categories**

 · **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

 · **TLV (Threshold Limit Value established by ACGIH)**

115-07-1 propene

A4

64-17-5 ethanol

A3

 · **MAK (German Maximum Workplace Concentration)**

64-17-5 ethanol

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 · **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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**Trade name: Hilti GC12**

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**· OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**· Chemical safety assessment:** not required.**16 Other information**

This information is based on our present knowledge. However, this 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 MSDS:**

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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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

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