

# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 08/10/2018

Revision date: 08/10/2018

Supersedes: 09/17/2015

Version: 1.2

### SECTION 1: Identification

#### 1.1. Identification

Product form	Mixture
Product name	GC 41
Product code	BU Direct Fastening

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Propellant for direct fastening tools.
------------------------------	--

#### 1.3. Details of the supplier of the safety data sheet

**Supplier**

Hilti, Inc.  
Legacy Tower, Suite 1000  
7250 Dallas Parkway  
TX 75024 Plano - USA  
T +1 9724035800  
1-800-879-8000 toll free - F +1 918 254 0522

**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)

#### 1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) +1 918 8723000 1-800-879-8000 toll free
------------------	---

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**GHS-US classification**

Flam. Gas 1 H220 - Extremely flammable gas.  
Press. Gas (Comp.) H280 - Contains gas under pressure; may explode if heated.

Full text of H statements : see section 16

#### 2.2. Label elements

**GHS-US labelling**

Hazard pictograms (GHS-US)



GHS02

GHS04

Signal word (GHS-US)

Danger

Hazard statements (GHS-US)

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

Precautionary statements (GHS-US)

P251 - Do not pierce or burn, even after use.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks  
P211 - Do not spray on an open flame or other ignition source.  
P381 - Eliminate all ignition sources if safe to do so.  
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
P403 - Store in a well-ventilated place.

# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
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

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of 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 and effects (acute and delayed)

No additional information available

### 4.3. Immediate medical attention and special treatment, if necessary

## SECTION 5: Firefighting measures

### 5.1. 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. Special hazards arising from the substance or mixture

Explosion hazard	Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
------------------	---

### 5.3. Advice for firefighters

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.

# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 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 material for containment and cleaning up

Methods for cleaning up Do not flush with water.

#### 6.4. Reference to other sections

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

### 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.

Storage temperature 41 - 77 °F

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.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Isobutane (75-28-5)		
ACGIH	ACGIH STEL (ppm)	1000 ppm
ACGIH	Remark (ACGIH)	CNS impair
propene (115-07-1)		
ACGIH	ACGIH TWA (ppm)	500 ppm
ACGIH	Remark (ACGIH)	Asphyxia; URT irr
Propane (74-98-6)		
ACGIH	Remark (ACGIH)	Simple Asphyxiant
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>

# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Propane (74-98-6)		
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

### 8.2. Exposure controls

Appropriate engineering controls	Ensure good ventilation of the work station.
Hand protection	In case of repeated or prolonged contact wear gloves.
Eye protection	Chemical goggles or safety glasses.
Skin and body protection	When using setting tools, sufficient ear protection must be worn.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Gas
Appearance	Aerosol.
Colour	Colourless
Odour	characteristic
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
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	No data available
Explosive limits	1.8 - 11.1 vol %
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Oxidising properties	No data available
Vapour pressure	3000 hPa
Relative density	No data available
Relative vapour density at 20 °C	No data available
Density	0.56 g/cm <sup>3</sup> (DIN 51757)
Solubility	insoluble in water.
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available

### 9.2. Other information

No additional information available

## 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 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 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 Not classified

<b>Isobutane (75-28-5)</b>	
LC50 inhalation rat (mg/l)	1443 mg/l (15 minutes, Rat, Male/female, Experimental value, Inhalation (gases))
LC50 inhalation rat (ppm)	11000 ppm
<b>propene (115-07-1)</b>	
LC50 inhalation rat (mg/l)	658 mg/l (4 h, Rat, Literature, Inhalation)
ATE US (vapours)	658 mg/l/4h
ATE US (dust,mist)	658 mg/l/4h
<b>Propane (74-98-6)</b>	
LC50 inhalation rat (ppm)	> 800000 ppm (15 minutes, Rat, Male/female, Experimental value, Inhalation (gases))
ATE US (gases)	280000 ppmv/4h
ATE US (vapours)	513 mg/l/4h
ATE US (dust,mist)	513 mg/l/4h

Skin corrosion/irritation Not classified  
 Serious eye damage/irritation Not classified  
 Respiratory or skin sensitisation Not classified  
 Germ cell mutagenicity Not classified  
 Carcinogenicity Not classified

Reproductive toxicity Not classified  
 STOT-single exposure Not classified

STOT-repeated exposure Not classified

Aspiration hazard Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>propene (115-07-1)</b>	
ErC50 (algae)	33.39 mg/l



# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

ADR	IMDG	IATA	RID
<b>14.1. UN number</b>			
3150	3150	3150	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
Packing instructions (ADR)	P209
Mixed packing provisions (ADR)	MP9
Tunnel restriction code (ADR)	D

#### - Transport by sea

Limited quantities (IMDG)	0
Packing instructions (IMDG)	P003
EmS-No. (Fire)	F-D
EmS-No. (Spillage)	S-U
Stowage category (IMDG)	B
MFAG-No	115

#### - Air transport

PCA packing instructions (IATA)	201
PCA max net quantity (IATA)	1kg
CAO packing instructions (IATA)	201

#### - Rail transport

Limited quantities (RID)	0
Packing instructions (RID)	P209
Carriage prohibited (RID)	No

# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

propene	CAS-No. 115-07-1	20 - <30%
<b>Isobutane (75-28-5)</b>		
Not subject to reporting requirements of the United States SARA Section 313		
<b>propene (115-07-1)</b>		
Subject to reporting requirements of United States SARA Section 313		
SARA Section 313 - Emission Reporting	1 %	
<b>Propane (74-98-6)</b>		
Not subject to reporting requirements of the United States SARA Section 313		

### 15.2. International regulations

#### CANADA

<b>GC 41</b>		
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas	
<b>Isobutane (75-28-5)</b>		
Listed on the Canadian DSL (Domestic Substances List)		
<b>propene (115-07-1)</b>		
Listed on the Canadian DSL (Domestic Substances List)		
<b>Propane (74-98-6)</b>		
Listed on the Canadian DSL (Domestic Substances List)		

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Gas 1 H220

Press. Gas (Comp.) H280

Full text of H statements : see section 16

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm



# GC 41

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 16: Other information

Revision date 08/10/2018

Full text of H-statements:

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

NFPA health hazard

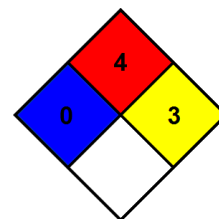
0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard

4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.

NFPA reactivity

3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.



Hazard Rating

Health

0 Minimal Hazard - No significant risk to health

Flammability

4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

Physical

3 Serious Hazard - Materials that may form explosive mixtures with water and are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical change at normal temperature and pressure with moderate risk of explosion

Personal protection

A  
A - Safety glasses

SDS\_US\_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*