GC 41

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date: 1/2/2026 Issue date: 1/2/2026 Supersedes: 7/29/2024 Version: 4.0

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Name	GC 41
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, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
US TX 75024 Plano
USA
T +1 9724035800
1-800-879-8000 toll free, F +1 918 254 0522

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
FL 9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-direct.fastening@hilti.com

1.5. Emergency phone number

Emergency number	Emergency CONTACT (24-Hour-Number) GBK/Infotrac ID 101022 (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable gas, Category 1A	H220	Extremely flammable gas.
Gas under pressure : Compressed gas	H280	Contains gas under pressure; may explode if heated.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

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)	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.
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 122 °F (50 °C).

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. 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	≥ 50 – < 70	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	≥ 10 – < 20	Flam. Gas 1A, H220 Press. Gas (Comp.), H280

Full text of hazard classes and 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)

Potential adverse human health effects and symptoms: 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. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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.

5.3. Special protective equipment and precautions 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.
For non-emergency personnel		
Emergency procedures	:	Ventilate spillage area. Evacuate area. No open flames, no sparks, and no smoking.
For emergency responders		
Protective equipment	:	Do not attempt to take action without suitable protective equipment. Breathing apparatus.
Environmental precautions	:	Avoid release to the environment. Prevent entry to sewers and public waters.

6.2. 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.

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

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	5 – 25 °C
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

GC 41	
No additional information available	

isobutane (75-28-5)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Isobutane
ACGIH® TLV® STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm
Remark (ACGIH®)	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2022

propene (115-07-1)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Propylene
ACGIH® TLV® TWA	860 mg/m³
	500 ppm
Remark (ACGIH®)	Asphyxia; URT irr
Regulatory reference	ACGIH 2023

Propane (74-98-6)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Propane
Remark (ACGIH®)	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH 2023
USA - ACGIH - Biological Exposure Indices	
Local name	2-Propanol

Propane (74-98-6)	
BEI	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B, Ns
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Propane
OSHA PEL TWA	1800 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Propane
NIOSH REL 10h TWA	1000 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Hand protection in accordance with the operating instructions for the tool

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):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Gas
Colour	Colourless
Odour	Sweet
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	-90 °C
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Extremely flammable aerosol.
Vapour pressure	8300 hPa
Relative vapour density at 20°C	No data available
Particle size	Not available
Relative density	No data available
Density	0.6 g/cm³ (DIN 51757)
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive limits	Lower explosion limit: 1.7 vol % Upper explosion limit: 11.1 vol %
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Oxidising properties	No data available

9.2. Other information

Heat of combustion	> 30 kJ/g NFPA 30B, Aerosol Classification Level: 3
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.

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)
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)

propene (115-07-1)	
IARC group	3 - Not classifiable

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 applicable
Viscosity, kinematic	No data available
Potential adverse human health effects and symptoms	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.

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

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

isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C)
Bioaccumulative potential	Bioaccumulation unlikely.

propene (115-07-1)	
Partition coefficient n-octanol/water (Log Kow)	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

No additional information available

12.5. Other adverse effects

Effect on global warming	No known effects from this product.
Other information	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	Disposal must be done according to official regulations.
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 DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
UN3150	UN3150	3150	3150
14.2. 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
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	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No. (DOT)	:	UN3150
DOT Packaging Exceptions (49 CFR 173.xxx)	:	306
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	304
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	15 kg
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’

TDG

UN-No. (TDG)	:	UN3150
ERAP Index	:	3000
Explosive Limit and Limited Quantity Index	:	0.125 L
Excepted quantities (TDG)	:	E0
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	1 L

IMDG

Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P003
EmS-No. (Fire)	:	F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	:	S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	:	B
Stowage and handling (IMDG)	:	SW2
Flash point (IMDG)	:	
Properties and observations (IMDG)	:	Various small devices used for cosmetic and other purposes, and their refills.
MFAG-No	:	115

IATA

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

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active 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%

15.2. International 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

Component	State or local regulations
isobutane(75-28-5)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
propene(115-07-1)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Propane(74-98-6)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date	01/02/2026
Data sources	Information provided by the manufacturer.
Training advice	Department issuing data specification sheet.
Other information	NFPA 30B.

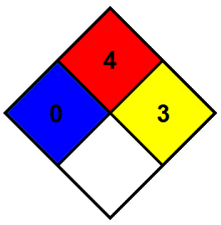
Full text of hazard classes and H-statements	
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated

Abbreviations and acronyms	
CAS-No.	Chemical Abstracts Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

Abbreviations and acronyms	
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 disruptor
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
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

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 - Safety glasses

Indication of changes:

Section	Changed item	Change	Comments
	SDS Regulation reference	Modified	
8	Personal protection	Modified	Hand protection
8	Occupational Exposure Limit	Added	
14	Transport information	Modified	

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.