

GC 20

Safety Data Sheet

JIS Z 7253:2012

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Supersedes:

Version:2.01

SECTION 1: Chemical product and company identification

1.1. Product name

Name GC 20
 Product code BU Direct Fastening



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

Use of the substance/mixture Gas can for use exclusively with the Hilti GX 120 tool
 Propellant for direct fastening tools

Recommended use

1.3. Details of the supplier of the safety data sheet

Supplier

日本ヒルティ株式会社
 神奈川県横浜市都筑区茅ヶ崎南2-6-20
 224-8550 〒 - 日本
 T +81 45 943 6211 - F +81 45 943 6418
hiltijapan@hilti.com

1.4. Emergency telephone number

Emergency number Schweizerisches Toxikologisches Informationszentrum - 24h Service
 +41 44 251 51 51 (international)
 +81 45 943 6211

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS classification

Physical hazards Flammable gases, Category 1
 Gases under pressure : Compressed gas
 Full text of hazard classes and H-statements : see section 16

Label elements

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS-JP)



GHS02

Signal word (GHS-JP) Danger
 Hazard statements (GHS-JP) Extremely flammable gas (H220)
 Contains gas under pressure; may explode if heated (H280)
 Prevention precautionary statements Keep away from heat, hot surfaces, open flames, sparks. - No smoking (P210)
 Response Precautionary Statements In case of fire: Use carbon dioxide (CO2), sand, extinguishing powder for

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Storage precautionary statements extinction (P370+P378)
 Leaking gas fire: Do not extinguish, unless leak can be stopped safely (P377)
 Protect from sunlight. Do not expose to temperatures exceeding 50 ° C
 (P410+P412)

Other hazards

Additional hazards when processed Flammable gas.
 Pressurized container: Do not pierce or burn, even after use.
 Keep away from Flammable gas. – No smoking.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Concentration	Formula	Kanpo number	CAS No
			GSCL no	
Isobutane	60 – 80%	C4H10	(2)-4	75-28-5
propene	25 – 40%	CH2=CHCH3	(2)-13	115-07-1
Propane	10 – 25%	CH3CH2CH3	(2)-3	74-98-6

Full text of H-statements: see section 16

SECTION 4: First aid measures

First aid measures

First-aid measures general Remove/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.

Most Important Symptoms/Effects

Other medical advice or treatment

SECTION 5: Fire fighting measures

Suitable extinguishing media Carbon dioxide. Alcohol-resistant foam. Water spray. Dry powder.
 Unsuitable extinguishing media Do not use a heavy water stream.

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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	Formation of toxic gases is possible during heating or in case of fire, Thermal decomposition generates : Carbon dioxide, Carbon monoxide
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.
Precautionary measures fire	Fight fire remotely due to the risk of explosion.
Other information	EN 12942. EN 12941.

SECTION 6: Accidental release measures

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.

Methods and Equipment for Containment and Cleaning up

Methods for cleaning up	Do not flush with water.
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SECTION 7: Handling and storage

Precautions for safe handling

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.
Additional hazards when processed	Flammable gas. Pressurized container: Do not pierce or burn, even after use. Keep away from Flammable gas. – No smoking.

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Storage precautionary statements

Storage conditions	Keep cool. Protect from sunlight. Keep in fireproof place. Store in dry protected location to prevent any moisture contact.
Technical measures	Proper grounding procedures to avoid static electricity should be followed.
Incompatible materials	Heat sources. Direct sunlight. Sources of ignition.
Heat and ignition sources	Keep away from heat and direct sunlight. Keep away from ignition sources.
Prohibitions on mixed storage	Do not store with DX powder cartridges.
Storage temperature	5 - 25 ° C

SECTION 8: Exposure controls / Personal protection equipment

Control parameters

Isobutane (75-28-5)			
Japan	Exposure limits (JSOH)	500ppm(1200mg/m3)	
Japan	Exposure limits (ACGIH)	TWA -,STEL 1000 ppm	
propene (115-07-1)			
Japan	Exposure limits (ACGIH)	TWA 500 ppm,STEL -	
Propane (74-98-6)			
Japan	Exposure limits (ACGIH)	TWA -,STEL -	

Exposure controls

Appropriate engineering controls Ensure good ventilation of the work station.

Hand protection In case of repeated or prolonged contact wear gloves.

Type	Material	Permeation	Thickness (mm)	Standard
Disposable gloves.	Nitrile rubber (NBR).	3 (> 60 minutes).	0,12	EN 374.

Eye protection Chemical goggles or safety glasses.

Type	Use	Characteristics	Standard
Safety glasses.		clear.	EN 166. EN 170.

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



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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Gas
Appearance	Clear, colorless gas.
Colour	
	Colourless
Odour	
	Sweet
Odour threshold	No data available
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	< 35 ° C
Flash point	No data available
Auto-ignition temperature	455 ° C
Decomposition temperature	No data available
Flammability (solid, gas)	Extremely flammable aerosol
Vapour pressure	8300 hPa
Relative vapour density at 20 ° C	No data available
Relative density	No data available
Density	0.55 g/cm ³ (DIN 51757)
Solubility	insoluble in water.
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	
	No data available
Oxidising properties	No data available
Explosive limits	1.7 vol % 11.1 vol %

Other information

Gas group	Compressed gas
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SECTION 10: Stability and reactivity

Reactivity	
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
Possibility of hazardous reactions	
Conditions to avoid	Heat,Sparks,Open flame,Direct sunlight,Overheating
Incompatible materials	
Hazardous decomposition products	
Other properties	

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SECTION 11: Toxicological information

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

Isobutane (75-28-5)	
LC50 inhalation rat (mg/l)	> 50 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	11000 ppm

propene (115-07-1)	
LC50 inhalation rat (mg/l)	658 mg/l/4h (Rat; Literature)

Propane (74-98-6)	
LC50 inhalation rat (mg/l)	513 mg/l/4h (Rat; Literature)
LC50 inhalation rat (ppm)	280000 ppm/4h (Rat; Literature)

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

Reproductive toxicity	Not classified.
Specific target organ toxicity (single exposure)	Not classified.

Specific target organ toxicity (repeated exposure)	Not classified.
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Aspiration hazard	Not classified
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Vaporizer	Container fitted with a sealed spray attachment
Human evidence for classification	No
Not able to form a pool	No
Hydrocarbon	No
Polycyclic-aromatic hydrocarbons	No
Aliphatic, alicyclic or aromatic hydrocarbon	No

SECTION 12: Ecological information

Toxicity

Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

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Isobutane (75-28-5)	
Threshold limit algae 1	1.07 mg/l (Algae)
Threshold limit algae 2	7.15 mg/l (72 h; Algae)
propene (115-07-1)	
Threshold limit algae 1	3 - 15,Algae; QSAR
Threshold limit algae 2	10 - 100,Algae; Estimated value
Propane (74-98-6)	
TLM fish 1	17.8 - 19.7,96 h; Pimephales promelas
Threshold limit algae 1	1.45 - 4.53,72 h; Algae
Threshold limit algae 2	8 mg/l (72 h; Algae)

Persistence and degradability

Isobutane (75-28-5)	
Persistence and degradability	Inherently biodegradable. Biodegradable in the soil. Not applicable (gas)
propene (115-07-1)	
Persistence and degradability	Not readily biodegradable in water. Inherently biodegradable. Biodegradable in the soil. Ozonation in the air. Photodegradation in the air
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
ThOD	3.43 g O ₂ /g substance
BOD (% of ThOD)	(5 day(s)) 0
Propane (74-98-6)	
Persistence and degradability	Readily biodegradable in water. Not applicable (gas). Photodegradation in the air

Bioaccumulative potential

Isobutane (75-28-5)	
BCF fish 1	20 - 52 (Pisces; QSAR)
BCF other aquatic organisms 1	20 - 52 (Daphnia magna; QSAR)
Log Pow	2.8 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)
propene (115-07-1)	
Log Pow	1.77 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)
Propane (74-98-6)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)

Mobility in soil

Isobutane (75-28-5)	
Surface tension	0.014 N/m (-10 ° C)
propene (115-07-1)	
Surface tension	0.02 N/m (-50 ° C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
Propane (74-98-6)	
Surface tension	0.016 N/m (-47 ° C)

Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

SECTION 13: Disposal considerations

Waste disposal recommendations Container under pressure. Do not drill or burn even after use.

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Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Contaminated container and packaging	
Regional legislation (waste)	Disposal must be done according to official regulations.
Additional information	
Additional information	Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
3150	3150	3150	3150
14.2. UN 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
Transport document description			
UN 3150 HYDROCARBON GAS REFILLS FOR SMALL DEVICES, 2.1, (D)	UN 3150 HYDROCARBON GAS REFILLS FOR SMALL DEVICES, 2.1		
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 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

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- 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

- Rail transport

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

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

Regulations in Japan

Regulatory information by sea	Conform to the provisions of the Ship Safety Law.
Regulatory information by air	Conform to the provisions of the Civil Aeronautics Law.
Other information	No supplementary information available

SECTION 15: Regulatory information

Ship Safety Act	Gases under pressure/Gases flammable under pressure(Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)
Civil Aeronautics Law	Gases under pressure/Gases flammable under pressure(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)
Port Regulation Law	Hazardous materials/High pressure gas (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods)

SECTION 16: Other information

SDS_JP_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