GC 22

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.
Issue date: 01/10/2025 Revision date: 01/10/2025 Supersedes version of: 14/12/2022 Version: 26.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	Mixture
Name	GC 22
UFI	W00P-0A5U-RV25-4RY0
Product code	BU Direct Fastening
Vaporizer	Container fitted with a sealed spray attachment

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

1.2.1. Relevant identified uses

Industrial/Professional use spec	For professional use only
Use of the substance/mixture	Propellant for direct fastening tools.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier
Hilti (Gt. Britain) Ltd.
1 Circle Square
3 Symphony Park
GB M1 7FS Manchester
Great Britain
T +44 161 886 1000
0800 886 100 Toll-free, F +44 161 872 1240
gbsales@hilti.com

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

1.4. Emergency telephone number

Emergency number

Emergency CONTACT (24-Hour-Number):
GBK GmbH Global Regulatory Compliance
+49 (0)6132-84463

+44 161 886 1000
0800 886 100 Toll-free

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	NHS Direct (England and Wales) NHS 24 (Scotland)		111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable gases, Category 1A	H220
Gases under pressure : Compressed gas	H280

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)

GHS02

Signal word (CLP)	Danger
Hazard statements (CLP)	H220 - Extremely flammable gas. H280 - Contains gas under pressure; may explode if heated.
Precautionary statements (CLP)	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 50 °C/122 °F.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
isobutane (75-28-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
propene (115-07-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Propane (74-98-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
propene (115-07-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
isobutane	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395-27	≥ 50 – < 70	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propene	CAS-No.: 115-07-1 EC-No.: 204-062-1 EC Index-No.: 601-011-00-9	20 – 30	Flam. Gas 1, H220 Press. Gas (Comp.), H280
Propane	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944-21	≥ 10 – < 20	Flam. Gas 1, H220 Press. Gas (Comp.), H280

Full text of H- and EUH-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, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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.

Hazardous decomposition products in case of fire: On burning: release of (highly) toxic gases/vapours. Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

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.

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 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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

isobutane (75-28-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Diacetyl; Butanedione
IOEL TWA	0.07 mg/m³
	0.02 ppm
IOEL STEL	0.36 mg/m³
	0.1 ppm

isobutane (75-28-5)	
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
propene (115-07-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Phenylpropene
IOEL TWA	246 mg/m³
	50 ppm
IOEL STEL	492 mg/m³
	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
EU - Biological Limit Value (BLV)	
Local name	Propylene oxide
BLV	1.3 Parameter: N-(3-hydroxypropyl) valine - Medium: blood
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
United Kingdom - Occupational Exposure Limits	
Local name	2-Phenylpropene
WEL TWA (OEL TWA)	246 mg/m³
	50 ppm
WEL STEL (OEL STEL)	491 mg/m³
	100 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Propane (74-98-6)	
United Kingdom - Occupational Exposure Limits	
Local name	(2-methoxymethylethoxy) propanol
WEL TWA (OEL TWA)	308 mg/m³
	50 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

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

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. ISO 16321-1. EN 170

8.2.2.2. Skin protection

Skin and body protection:
When using cartridge operated tools, sufficient ear protection must be worn.

Hand protection:
Hand protection in accordance with the operating instructions for the tool

8.2.2.3. Respiratory protection

Respiratory protection:
No respiratory protection needed under normal use conditions

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Consumer exposure controls:
No additional information available.
No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Gas
Colour	Colourless.
Odour	Sweet.
Odour threshold	Not available
Melting point	Not applicable
Freezing point	Not applicable
Boiling point	Not available
Flammability	Extremely flammable gas.
Explosive properties	Product is not explosive. In use, may form flammable/explosive vapour-air mixture.
Lower explosion limit	1.7 vol %
Upper explosion limit	11.1 vol %
Flash point	Not applicable
Auto-ignition temperature	Not available
Decomposition temperature	Not available
pH	Not applicable
Viscosity, kinematic	Not applicable
Solubility	insoluble in water.

Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	8300 hPa
Vapour pressure at 50°C	Not available
Density	0.6 g/cm³ (DIN 51757)
Relative density	Not applicable
Relative vapour density at 20°C	Not available
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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 hazard classes as defined in Regulation (EC) No 1272/2008

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)

isobutane (75-28-5)	
LC50 Inhalation - Rat [ppm]	> 18000 ppm

propene (115-07-1)	
LC50 Inhalation - Rat	> 688 mg/m³

Propane (74-98-6)	
LC50 Inhalation - Rat [ppm]	> 280000 ppm (literature)

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)

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

GC 22	
Vaporizer	Container fitted with a sealed spray attachment

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	No additional information available

11.2.2. Other information

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.
Hazardous to the aquatic environment, short–term (acute)	Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long–term (chronic)	Not classified (Based on available data, the classification criteria are not met)

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. Results of PBT and vPvB assessment

GC 22
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment 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.
European List of Waste (LoW, EC 2000/532): 14 06 03* - other solvents and solvent mixtures
16 05 04* - gases in pressure containers (including halons) containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 3150	UN 3150	UN 3150	UN 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

ADR	IMDG	IATA	RID
Transport document description			
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
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
Excepted quantities (ADR)	E0
Packing instructions (ADR)	P209
Mixed packing provisions (ADR)	MP9
Transport category (ADR)	2
Special provisions for carriage - Loading, unloading and handling (ADR)	CV9
Special provisions for carriage - Operation (ADR)	S2
Tunnel restriction code (ADR)	D
EAC code	2YE

Transport by sea

Limited quantities (IMDG)	0
Excepted quantities (IMDG)	E0
Packing instructions (IMDG)	P003
EmS-No. (Fire)	F-D
EmS-No. (Spillage)	S-U
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

Air transport

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

Rail transport

Classification code (RID)	6F
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P209
Mixed packing provisions (RID)	MP9
Transport category (RID)	2
Special provisions for carriage - Loading, unloading and handling (RID)	CW9
Colis express (express parcels) (RID)	CE2
Hazard identification number (RID)	23

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Seveso Directive (Disaster Risk Reduction)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
P2 FLAMMABLE GASES Flammable gases, Category 1 or 2	10	50

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Abbreviations and acronyms:	
NOAEC	No-Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level

Data sources: European Chemicals Agency, http://echa.europa.eu/. manufacturer.
Training advice: Department issuing data specification sheet.

Full text of H- and EUH-statements:	
Flam. Gas 1	Flammable gases, Category 1
Flam. Gas 1A	Flammable gases, Category 1A
Press. Gas (Comp.)	Gases under pressure : Compressed gas
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

SDS EU 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.