

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 12/13/2022 Revision date: 12/13/2022 Supersedes version of: 11/29/2017

Version: 2.0

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

1.1. Product identifier

Product form Name UFI Product code Vaporizer Mixture GC 42 W00P-0A5U-RV25-4RY0 BU Direct Fastening 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 Use of the substance/mixture For professional use only 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 France S.A.S. 126 rue Gallieni FR– 92100 Boulogne-Billancourt France T +33 825 01 05 05 <u>fr-contactez-nous@hilti.com</u> Department issuing data specification sheet Hilti Entwicklungsgesellschaft mbH Hiltistrasse 6 DE- 86916 Kaufering Deutschland T +49 8191 906310 - F +49 8191 90176310 df-hse@hilti.com

1.4. Emergency telephone number

Emergency number

Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international)

SECTION 2: Hazards identification		
2.1. Classification of the substance or mixtu	Ire	
Classification according to Regulation (EC) No. 1	272/2008 [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)		
Signal word (CLP)	GHS02	
c	Danger	
Hazard statements (CLP)	H220 - Extremely flammable gas. H280 - Contains gas under pressure; may explode if heated.	



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r ignition sources.
ding 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/vPvB substances \geq 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 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 at a concentration equal to or greater than 0,1 %

Component	
isobutane(75-28-5)	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
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
propane(74-98-6)	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	55 - <65	Flam. Gas 1A, H220 Press. Gas (Comp.), H280



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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propene	CAS-No.: 115-07-1 EC-No.: 204-062-1 EC Index-No.: 601-011-00-9	20 - <30	Flam. Gas 1A, 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	5 - <15	Flam. Gas 1A, H220 Press. Gas (Liq.), 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.

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 substa	nce 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 equipm	ent 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.	



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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.	
0.4 Defenses to other continue		

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	e	
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
- No additional information available

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.



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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. EN 166. 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:

In case of repeated or prolonged contact wear gloves

Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)	0,12		EN ISO 374

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

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 aerosol, 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
рН	Not applicable
Viscosity, kinematic	Not applicable
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	Not available



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Vapour pressure Vapour pressure at 50°C	8300 hPa Not available
Density	0.6 g/cm ³ (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: Stabilit	

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)



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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 classified (Based on available data, the classification criteria are not met)
GC 42	
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 additional information available,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.

Not classified (Based on available data, the classification criteria are not met)			
Not classified (Based on available data, the classification criteria are not met)			
24.11 – 147.54 mg/l (Quantitative structure-activity relationship (QSAR))			
7.02 – 69.43 mg/l (Quantitative structure-activity relationship (QSAR))			
7.71 – 16.5 mg/l (Quantitative structure-activity relationship (QSAR))			
43.3 mg/l (72 h; Oncorhynchus mykiss (Rainbow trout); Quantitative structure-activity relationship (QSAR))			
28.2 mg/l (48 h; daphnia; Quantitative structure-activity relationship (QSAR))			
12.1 mg/l (algae; Quantitative structure-activity relationship (QSAR))			
Readily biodegradable.			
·			
Readily biodegradable in water.			
Readily biodegradable in water.			
12.3. Bioaccumulative potential			
1.09 – 2.8 (20 °C)			
Bioaccumulation unlikely.			



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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 42		
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 Endeaving discusting proportion		

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information

Avoid release to the environment.

SECTION 13: Disposal consideration	ons
13.1. Waste treatment methods	
Regional legislation (waste)	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) code	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	ΙΑΤΑ	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
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



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ADR	IMDG	ΙΑΤΑ	RID	
		2		
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)	EO
Packing instructions (ADR)	P209
Mixed packing provisions (ADR)	MP9
Transport category (ADR)	2
Special provisions for carriage - Loading, unloading	CV9
and handling (ADR)	
Special provisions for carriage - Operation (ADR)	S2
Tunnel restriction code (ADR)	D
	2
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)	В
Stowage and handling (IMDG)	SW2
MFAG-No	115
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
ERG code (IATA)	IUL
Rail transport	
Classification code (RID)	6F
Limited quantities (RID)	0
Excepted quantities (RID)	E0
Packing instructions (RID)	P209
Mixed packing provisions (RID)	MP9
	MP9 2
Transport category (RID)	2



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Special provisions for carriage - Loading, unloading	CW9
and handling (RID)	
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 1005/2009 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 (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 (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



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Indication of changes			
Section	Changed item	Change	Comments
	General	Modified	SDS EU format according to COMMISSION REGULATION (EU) 2020/878
1	UFI	Added	
1.2	Use of the substance/mixture	Modified	
2.2	Labelling according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
8.2	Personal protective equipment	Modified	
9	Physical and chemical properties	Modified	
11	Toxicological information	Modified	
12.	Ecotoxicological information	Modified	
15	Regulatory information	Added	

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 disrupting properties	
EC-No.	European Community number	
EN	European Standard	
ΙΑΤΑ	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	
РВТ	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	



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Abbreviations and acronyms:	
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

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

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

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.