

1.1. Product identifier

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 12/15/2022 Revision date: 12/15/2022 Supersedes version of: 2/23/2018

Version: 2.0

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

Product form
Name
UFI
Product code
Vaporizer

Mixture GC 52 FURR-4ADU-1V22-M4PH 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
fr-contactez-nous@hilti.com

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)

2.1. Classification of the substance of	ation or mixture
Classification according to Regulation (E	
Flammable gases, Category 1A	H220
Gases under pressure : Compressed gas	H280
Full text of H- and EUH-statements: see sec	tion 16
Adverse physicochemical, human health No additional information available	and environmental effects
2.2. Label elements	
Labelling according to Regulation (EC) N	o. 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.
	P102 - Keep out of reach of children.



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
but-1-ene (106-98-9)	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
Polyethylene glycol (25322-68-3)	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	
but-1-ene(106-98-9)	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
Polyethylene glycol(25322-68-3)	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



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

3.2. Mixtures			
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
but-1-ene	CAS-No.: 106-98-9 EC-No.: 203-449-2 EC Index-No.: 601-012-00-4	40 - 60	Flam. Gas 1A, H220 Press. Gas (Comp.), H280
propene	CAS-No.: 115-07-1 EC-No.: 204-062-1 EC Index-No.: 601-011-00-9	25 - 40	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 - 10	Flam. Gas 1A, H220 Press. Gas (Liq.), H280
Polyethylene glycol	CAS-No.: 25322-68-3 EC-No.: 500-038-2	1 - 3	Not classified

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

SECTION 4: First aid measures

4.1. Description	n of first	t aid measures	
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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 im	nmediate medical attention an	d special treatment needed
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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 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.	



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 6: Accidental release 1 6.1. Personal precautions, protective ed	
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	y to sewers and public waters.
6.3. Methods and material for containm	ent 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	ge
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, includi	ing 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



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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. 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	characteristic.
Odour threshold	Not available
Melting point	Not applicable
Freezing point	Not applicable
Boiling point	Not available
Flammability	Extremely flammable aerosol.
Lower explosion limit	1.6 vol %
Upper explosion limit	11.1 vol %
Flash point	-88.6 °C
Auto-ignition temperature	287 °C
Decomposition temperature	Not available



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

pH
Viscosity, kinematic
Solubility
Partition coefficient n-octanol/water (Log Kow)
Vapour pressure
Vapour pressure at 50°C
Density
Relative density
Relative vapour density at 20°C
Particle characteristics

Not applicable Not applicable Not available 8300 hPa Not available 0.6 g/cm³ (DIN 51757) Not applicable Not available Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosion limits

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) Acute toxicity (dermal) Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met) Not classified (Based on available data, the classification criteria are not met) Not classified (Based on available data, the classification criteria are not met)
propene (115-07-1)	
LC50 Inhalation - Rat	> 688 mg/m ³
propane (74-98-6)	
LC50 Inhalation - Rat [ppm]	> 280000 ppm (literature)
Polyethylene glycol (25322-68-3)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423 method)
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402 method)
Skin corrosion/irritation	Not classified (Based on available data, the classification criteria are not met)



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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 classified (Based on available data, the classification criteria are not met)
GC 52	
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

SECTION 12: Ecological information	
12.1. Toxicity	
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)
but-1-ene (106-98-9)	
LC50 - Fish [1]	14758 mg/l (72 h; Quantitative structure-activity relationship (QSAR); Oncorhynchus mykiss)
EC50 - Crustacea [1]	18.7 mg/l (48 h; Quantitative structure-activity relationship (QSAR); Daphnia sp.)
EC50 96h - Algae [1]	14.9 mg/l (Quantitative structure-activity relationship (QSAR); algae)
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))
Polyethylene glycol (25322-68-3)	
LC50 - Fish [1]	> 100 mg/l (96 h; Poecilia reticulata; (OECD 203 method))
EC50 - Crustacea [1]	> 100 mg/l (48 h; Daphnia magna; (OECD 202 method))
ErC50 algae	100 – 1000 mg/l (96 h)
NOEC chronic fish	13671.586 mg/l (28 d; Poecilia reticulata (Guppy)
NOEC chronic crustacea	17475.27 mg/l (21 d; Daphnia magna; (calculated value))



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

propene (115-07-1)		
Persistence and degradability	Readily biodegradable in water.	
propane (74-98-6)		
Persistence and degradability	Readily biodegradable in water.	
Polyethylene glycol (25322-68-3)		
Persistence and degradability	Readily biodegradable.	

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)		
accumulative potential Low bioaccumulation potential (Log Kow < 4).		
Polyethylene glycol (25322-68-3)		
Bioaccumulative potential	not bioaccumulable.	

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment	
GC 52	
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 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



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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
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 availa	able		
14.6. Special precautions for us	ser		
Overland transport			

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
Transport by sea	
Limited quantities (IMDG)	0
Excepted quantities (IMDG)	E0
Packing instructions (IMDG)	P003
	- D
EmS-No. (Fire)	F-D
EmS-No. (Fire) EmS-No. (Spillage)	F-D S-U
EmS-No. (Spillage)	S-U
EmS-No. (Spillage) Stowage category (IMDG)	S-U B
EmS-No. (Spillage) Stowage category (IMDG) Stowage and handling (IMDG)	S-U B SW2
EmS-No. (Spillage) Stowage category (IMDG) Stowage and handling (IMDG)	S-U B SW2
EmS-No. (Spillage) Stowage category (IMDG) Stowage and handling (IMDG) MFAG-No	S-U B SW2



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

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
40.	but-1-ene ; propene ; propane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

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)



according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

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



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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 Bioaccumulativ	Abbreviations and acron	yms:
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 Effec	ED	Endocrine disrupting properties
IATAInternational Air Transport AssociationIMDGInternational Maritime Dangerous GoodsIOELVIndicative Occupational Exposure Limit ValueLC50Median lethal concentrationLD50Median lethal doseNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentN.O.S.Not Otherwise SpecifiedOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationREACHRegistration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006RIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantTLMMedian Tolerance LimitTRGSTechnical Rules for Hazardous SubstancesVOCVolatile Organic CompoundsWGKWater Hazard ClassVPVBVery Persistent and Very BioaccumulativeNOAELNo-Observed Adverse Effect Concentration	EC-No.	European Community number
IMDGInternational Maritime Dangerous GoodsIOELVIndicative Occupational Exposure Limit ValueLC50Median lethal concentrationLD50Median lethal doseNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentN.O.S.Not Otherwise SpecifiedOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationREACHRegistration, Evaluation and Restriction of Chemicals Regulation (EC) No 1907/2006RIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantTLMMedian Tolerance LimitTRGSTechnical Rules for Hazardous SubstancesVOCVolatile Organic CompoundsWGKWater Hazard ClassVPVBVery Persistent and Very BioaccumulativeNOAELNo-Observed Adverse Effect LevelNOAELNo-Observed Adverse Effect Concentration	EN	European Standard
IOPELV Indicative Occupational Exposure Limit Value ICOELV Indicative Occupational Exposure Limit Value ICOS0 Median lethal concentration IDD50 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 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 Lovel NOAEC No-Observed Adverse Effect Concentration	ΙΑΤΑ	International Air Transport Association
LC50Median lethal concentrationLD50Median lethal doseNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentN.O.S.Not Otherwise SpecifiedOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationREACHRegistration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006RIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantTLMMedian Tolerance LimitTRGSTechnical Rules for Hazardous SubstancesVOCVolatile Organic CompoundsWGKWater Hazard ClassvPvBVery Persistent and Very BioaccumulativeNOAELNo-Observed Adverse Effect LovelNOAECNo-Observed Adverse Effect Concentration	IMDG	International Maritime Dangerous Goods
LD50Median lethal doseNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentN.O.S.Not Otherwise SpecifiedOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationREACHRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantTLMMedian Tolerance LimitTRGSTechnical Rules for Hazardous SubstancesVOCVolatile Organic CompoundsWGKWater Hazard ClassvPvBVery Persistent and Very BioaccumulativeNOAELNo-Observed Adverse Effect Concentration	IOELV	Indicative Occupational Exposure Limit Value
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	LC50	Median lethal concentration
Decomposition 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	LD50	Median lethal dose
N.O.S.Not Otherwise SpecifiedOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationREACHRegistration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006RIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantTLMMedian Tolerance LimitTRGSTechnical Rules for Hazardous SubstancesVOCVolatile Organic CompoundsWGKWater Hazard ClassvPvBVery Persistent and Very BioaccumulativeNOAELNo-Observed Adverse Effect Level	NOEC	No-Observed Effect Concentration
Determination Determination 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	OECD	Organisation for Economic Co-operation and Development
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	N.O.S.	Not Otherwise Specified
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 Concentration	OEL	Occupational Exposure Limit
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	РВТ	Persistent Bioaccumulative Toxic
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	PNEC	Predicted No-Effect Concentration
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	REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
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	RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
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	SDS	Safety Data Sheet
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	STP	Sewage treatment plant
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	TLM	Median Tolerance Limit
WGK Water Hazard Class vPvB Very Persistent and Very Bioaccumulative NOAEL No-Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration	TRGS	Technical Rules for Hazardous Substances
vPvB Very Persistent and Very Bioaccumulative NOAEL No-Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration	VOC	Volatile Organic Compounds
NOAEL No-Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration	WGK	Water Hazard Class
NOAEC No-Observed Adverse Effect Concentration	vPvB	Very Persistent and Very Bioaccumulative
	NOAEL	No-Observed Adverse Effect Level
LOAEL Lowest 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





according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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.