

GC FX 3

Safety Data Sheet

According to SS 586 Part 3 (2022)
Issue date: 03.09.2025

Revision date: 03.09.2025

Supersedes: 02.06.2025

Version: 3.1

SECTION 1: Identification

1.1. Product identifier

Name	GC FX 3
Product code	BU Direct Fastening
Product form	Mixture

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use	Gas can for use exclusively with the Hilti FX 3-A tool, For professional use only
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1.4. Supplier's details

Supplier

Hilti Far East Private Ltd.
80 Pasir Panjang Road, #16-83/84 Mapletree Business City Singapore
Singapur 117372
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

Department issuing data specification sheet

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

1.5. Emergency phone number

Emergency number	GBK GmbH Global Regulatory Compliance +49 (0)6132-84463
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SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Physical hazards	Gases under pressure : Compressed gas
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2.2. GHS label elements, including precautionary statements

Hazard pictograms (GHS SG)



Signal word (GHS SG)

Warning

Hazard statements (GHS SG)

H280 : Contains gas under pressure; may explode if heated

Precautionary statements

Prevention

P251 : Do not pierce or burn, even after use.

Storage

P402 : Store in a dry place.

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 which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Synonyms	Concentration (%)	Formula	Product identifier	GHS SG classification
argon	-	≥ 80	Ar	CAS-No.: 7440-37-1 EC-No.: 231-147-0	Press. Gas (Comp.), H280
Carbon dioxide	-	10 – 25	CO2	CAS-No.: 124-38-9 EC-No.: 204-696-9	Press. Gas (Liq.), H280

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	Asphyxiant in high concentrations. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
Inhalation	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Low concentrations of CO2 cause increased respiration and headache.
Skin contact	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.
Eye contact	Rinse immediately with plenty of water. Rinse eyes with water as a precaution.
Ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	Respiratory complaints.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	The product is non-combustible. Use extinguishing agent suitable for surrounding fire.
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5.2. Specific hazards arising from the chemical

Explosion hazard	Contains gas under pressure; may explode if heated.
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5.3. Special protective actions for fire fighters

Firefighting instructions	In case of fire: stop leak if safe to do so. Continue water spray from protected position until container stays cool.
Protection during firefighting	Wear recommended personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Evacuate area. Mechanically ventilate the spillage area.
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6.1.1. For non-emergency personnel

Emergency procedures	Evacuate area. Ventilate spillage area.
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6.1.2. For emergency responders

Protective equipment

Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures

Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Provide adequate ventilation.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Ensure good ventilation of the work station. Pressurized container: Do not pierce or burn, even after use. Damaged cylinders should be handled by specialists only. Carefully comply with the instructions for use.

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

Storage conditions

Store at temperatures not exceeding 50 °C. Protect from sunlight. Store in a well-ventilated place. Keep cool. Store in a dry place.

Incompatible products

Strong acids. Strong bases. Combustible materials.

Incompatible materials

Sources of ignition. Direct sunlight. Heat sources.

Storage temperature

-20 – 50 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters/Occupational exposure limits

Carbon dioxide (124-38-9)	
Singapore - Occupational Exposure Limits	
Local name	Carbon dioxide
PEL (OEL TWA)	9000 mg/m ³
	5000 ppm
OEL STEL	54000 mg/m ³
	30000 ppm
Regulatory reference	WSH Regulations 2014

8.2. Appropriate engineering control measures

Appropriate engineering controls

Ensure good ventilation of the work station. Systems under pressure should be regularly checked for leakages.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection

Not required for normal conditions of use

Eye protection

Safety glasses

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Type	Field of application	Characteristics	Standard
Safety glasses		clear	EN 166, EN 170

Respiratory protection

Keep self contained breathing apparatus readily available for emergency use.

Personal protective equipment symbol(s)



Thermal hazard protection

No information available.

Environmental exposure controls

No specific measures are required provided the product is handled in accordance with the general rules of occupational hygiene and safety. Avoid release to the environment.

Consumer exposure controls

Avoid contact during pregnancy/while nursing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Gas
Colour	Colourless
Odour	odourless
Odour threshold	No data available
pH	Not applicable
Melting point	Not applicable
Freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not available
Flammability	Non flammable
Explosive limits	Explosive properties: Not applicable. Oxidising properties: Not applicable.
Vapour pressure	Not available
Vapour pressure at 50°C	Not available
Relative vapour density at 20°C	Not available
Density	Not available
Relative density	Not available
Solubility	Not available
Partition coefficient n-octanol/water (Log Kow)	Not available
Partition coefficient n-octanol/water (Log Pow)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity, kinematic	Not available
Particle size	Not applicable
Particle size distribution	Not available
Particle shape	Not available
Particle aspect ratio	Not available
Particle specific surface area	Not available

9.2. Other information

Gas group	Gases under pressure : Compressed gas
Other properties	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Moisture.

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Acute toxicity

Acute toxicity (oral)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion or irritation	Not classified (Based on available data, the classification criteria are not met) pH: Not applicable
Serious eye damage or 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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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)
Other information	Avoid release to the environment.

Carbon dioxide (124-38-9)	
LC50 - Fish [1]	35 ppm (96 h; Salmo gairdneri; Literature data)
Partition coefficient n-octanol/water (Log Pow)	0.83 (Measured)
argon (7440-37-1)	

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argon (7440-37-1)	
Partition coefficient n-octanol/water (Log Pow)	0.74 (Measured)

12.2. Persistence and degradability

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Persistence and degradability	Not established.

Carbon dioxide (124-38-9)	
Persistence and degradability	Not applicable.

argon (7440-37-1)	
Persistence and degradability	Not applicable.

12.3. Bioaccumulative potential

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Bioaccumulative potential	No additional information available

Carbon dioxide (124-38-9)	
Partition coefficient n-octanol/water (Log Pow)	0.83 (Measured)

argon (7440-37-1)	
Partition coefficient n-octanol/water (Log Pow)	0.74 (Measured)

12.4. Mobility in soil

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Mobility in soil	No additional information available

Carbon dioxide (124-38-9)	
Partition coefficient n-octanol/water (Log Pow)	0.83 (Measured)

argon (7440-37-1)	
Partition coefficient n-octanol/water (Log Pow)	0.74 (Measured)

12.5. Other adverse effects

Ozone	Not classified (Based on available data, the classification criteria are not met)
Other adverse effects	No additional information available

SECTION 13: Disposal considerations

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1956	UN 1956	UN 1956	UN 1956	UN 1956

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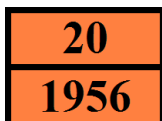
According to SS 586 Part 3 (2022)

ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture)	COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture)	Compressed gas, n.o.s. (Argon, Carbon dioxide mixture)	COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture)	COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture)
Transport document description				
UN 1956 COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture), 2.2, (E)	UN 1956 COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture), 2.2	UN 1956 Compressed gas, n.o.s. (Argon, Carbon dioxide mixture), 2.2	UN 1956 COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture), 2.2	UN 1956 COMPRESSED GAS, N.O.S. (Argon, Carbon dioxide mixture), 2.2
14.3. Transport hazard class(es)				
2.2	2.2	2.2	2.2	2.2
				
14.4. Packing group				
Not applicable	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	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	1A
Special provisions (ADR)	274, 378, 392, 655, 662
Limited quantities (ADR)	120ml
Excepted quantities (ADR)	E1
Packing instructions (ADR)	P200
Mixed packing provisions (ADR)	MP9
Portable tank and bulk container instructions (ADR)	(M)
Tank code (ADR)	CxBN(M)
Tank special provisions (ADR)	TA4, TT9
Vehicle for tank carriage	AT
Transport category (ADR)	3
Special provisions for carriage - Loading, unloading and handling (ADR)	CV9, CV10, CV36
Hazard identification number (Kemler No.)	20
Orange plates	



Tunnel restriction code (ADR)	E
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Transport by sea

Special provisions (IMDG)	274, 378, 392
Limited quantities (IMDG)	120 ml
Excepted quantities (IMDG)	E1

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Packing instructions (IMDG)	P200
EmS-No. (Fire)	F-C
EmS-No. (Spillage)	S-V
Stowage category (IMDG)	A
Flash point (IMDG)	
Properties and observations (IMDG)	
MFAG-No	126

Air transport

PCA Excepted quantities (IATA)	E1
PCA Limited quantities (IATA)	Forbidden
PCA limited quantity max net quantity (IATA)	Forbidden
PCA packing instructions (IATA)	200
PCA max net quantity (IATA)	75kg
CAO packing instructions (IATA)	200
CAO max net quantity (IATA)	150kg
Special provisions (IATA)	A202
ERG code (IATA)	2L

Inland waterway transport

Classification code (ADN)	1A
Special provisions (ADN)	274, 378, 392, 655, 662
Limited quantities (ADN)	120 ml
Excepted quantities (ADN)	E1
Equipment required (ADN)	PP
Number of blue cones/lights (ADN)	0
Additional requirements/Remarks (ADN)	

Rail transport

Classification code (RID)	1A
Special provisions (RID)	274, 378, 392, 655, 662
Limited quantities (RID)	120ml
Excepted quantities (RID)	E1
Packing instructions (RID)	P200
Mixed packing provisions (RID)	MP9
Portable tank and bulk container instructions (RID)	(M)
Tank codes for RID tanks (RID)	CxBN(M)
Special provisions for RID tanks (RID)	TA4, TT9
Transport category (RID)	3
Special provisions for carriage - Loading, unloading and handling (RID)	CW9, CW10, CW36
Colis express (express parcels) (RID)	CE3
Hazard identification number (RID)	20

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Regulation		Component / Mixture
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations	Applicable	Carbon dioxide; argon
Arms and Explosives Act	Not applicable	
Chemical Weapons Prohibition Act		

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Regulation	Component / Mixture
Environmental Protection and Management (Air Impurities) Regulations	
Environmental Protection and Management Act (Hazardous Substances)	
Environmental Public Health (Quality of Piped Drinking Water) Regulations	
Fire Safety Act/Fire Safety (Petroleum and Flammable Materials) Regulations	
Maritime and Port Authority of Singapore (Dangerous, Petroleum and Explosives) Regulations	
Misuse of Drugs Act	
Poisons Act	
Poisons Rules	
Hazardous waste (Control of export, import and transit) Act	
Strategic goods (Control) Act	

15.2. International regulations

No additional information available

SECTION 16: Other information

Issue date	03/09/2025
Revision date	03/09/2025
Supersedes	2/6/2025
Data sources	European Chemicals Agency, http://echa.europa.eu/ . manufacturer.
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

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RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

SDS - Safety Data Sheet

STP - Sewage treatment plant

TLM - Median Tolerance Limit

TRGS - Technical Rules for Hazardous Substances

VOC - Volatile Organic Compounds

WGK - Water Hazard Class

vPvB - Very Persistent and Very Bioaccumulative

NOAEL - No-Observed Adverse Effect Level

NOAEC - No-Observed Adverse Effect Concentration

LOAEL - Lowest Observed Adverse Effect Level

SDS SG 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.