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

1.1. Product identifier

Trade name	Silicon tetrachloride
Chemical description	Silicon tetrachloride
CAS N°	10026-04-7
CE N°	233-054-0
Index N°	014-002-00-4
Registration n°	01-2119489367-22
Chemical formula	SiCl ₄

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

Relevant identified uses	Industrial and professional Test gas/Calibration gas Chemical reaction / Synthesis Use for manufacture of electronic/photovoltaic components Laboratory use Contact supplier for more information on uses
Uses advised against	Consumer use not recommended

1.3. Details of the supplier of the safety data sheet

Company identification	MULTIGAS Route de l'Industrie 102 CH-1564 Domdidier
Phone number	+41 (0) 26 676 94 94
E-mail address	info@multigas.ch

1.4. Emergency telephone numbers


145 (Toxicology Centre Zurich) or +41 (0) 44 251 51 51
 +41 (0) 26 676 94 94 (Multigas)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Physical hazards	Gases under pressure : Liquefied gas	H280
	Acute toxicity, Oral, Category 3	H301

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Skin corrosion/irritation, Category 1A	H314
Serious eye damage/eye irritation, Category 1	H318
Acute toxicity (inhalation: gas) Category 3	H331
Specific target organ toxicity - single exposure (Category 3), Respiratory system	H335

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

2.2. Label elements

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

Hazard pictograms



GHS04 GHS05 GHS06

Signal word


Danger

Hazard statements

H280	Contains gas under pressure; may explode if heated
H301+H331	Toxic if swallowed, if inhaled
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
EUH071	Corrosive to the respiratory tract

Precautionary statements

P260	Do not breathe gas, vapours
P280	Wear protective gloves, protective clothing, eye protection, face protection
P301+P310+P330+P315	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Get immediate medical advice / attention
P303+P361+P353+P315	IF ON SKIN: (or hair) Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get immediate medical advice / attention
P304+P340+P315	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice / attention
P305+P351+P338+P315	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice / attention
P410+P233	Protect from sunlight. Keep container tightly closed
P405	Store locked up

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2.3. Other hazards

None

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Silicon tetrachloride	(CAS-No.) 10026-04-7 (EC-No.) 233-054-0 (EC Index-No.) 014-002-00-4 (Registration-No.) 01-2119489367-22	<= 100%	Press. Gas (Liq.), H280 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 Acute Tox. 3 (inhalation) H331 STOT SE 3, H335

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

Contains no other components or impurities which will influence the classification of the product

3.2. Mixtures

Not established

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	See a doctor. Show this safety data sheet to the attending physician
In case of inhalation	In case of inhalation, remove the person from the contaminated area. In case of respiratory arrest, give artificial respiration. See a doctor
In case of skin contact	Remove contaminated clothing and shoes immediately. Wash with soap and plenty of water. Take victim immediately to hospital. See a doctor
In case of eyes contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor
In case of ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. See a doctor

4.2. Most important symptoms and effects, both acute and delayed

May cause severe chemical burns to skin and cornea
Prolonged exposure to small concentrations may result in pulmonary oedema.
Delayed adverse effects possible.
Material is destructive to tissue of the mucous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea
Refer to section 11

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

No data available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray or water mist. Dry powder. Carbon dioxide. Foam

Unsuitable extinguishing media Do not use water jet to extinguish

5.2. Special hazards arising from the substance or mixture

Specific hazards In case of fire or excessive heat, hazardous combustion products may be produced

Exposure to fire may cause containers to rupture/explode

Hazardous combustion products In case of fire or excessive heat, hazardous combustion products may be produced such as : hydrogen chloride

5.3. Additional information

Cool endangered receptacles with water spray jet from a protected position

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, spray mists or gases

Provide adequate ventilation

Evacuate personnel to a safe place

Personal protective equipment, see section 8

6.2. Environmental precautions

Try to stop the leak

6.3. Methods and material for containment and cleaning up

Ventilate the area

Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost)

6.4. Reference to other sections

See also sections 8 and 13

SECTION 7: Handling and storage


7.1. Precautions for safe handling

Avoid contact with skin and eyes

Avoid breathing vapour or mist

Keep away from sources of ignition - No smoking

For precautions, see section 2.2

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7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place

Never allow the product to come into contact with water during storage

Content under pressure

7.3. Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with occupational exposure limits

Component	CAS N°	Exposure value type	Control parameter	Source
Silicon tetrachloride	10026-04-7	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation

Gas detectors should be used when flammable / toxic gases / vapours are likely to be released

8.2.2. Individual protection measures, e.g. personal protective equipment

Eye/face protection

Wear goggles and a face shield when transfilling or breaking transfer connections. Standard EN 166

Skin / hand protection

Wear protective gloves when handling gas cylinders. Standard EN 388- Protective gloves against mechanical hazards Wear cold insulating gloves when transferring or disconnecting transfer lines Standard EN 511 - Insulating gloves against cold Wearing chemical resistant gloves Standard EN 374-Protective gloves against chemicals

For short-term use


Material: Nitrile rubber

Penetration time: 480 min

Glove thickness: 0.11 mm

For long-term use

Material: Nitrile rubber

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9.2. Other information

Molar mass	169.9 g/mol
Critical temperature [°C]	No data available
	5.87
Relative vapour density	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Reacts violently with water

10.4. Conditions to avoid

Avoid moisture in installation systems

10.5. Incompatible materials

Strong bases, Potassium, Strong acids, Sodium/sodium oxides, Alcohols, Metals, Water

For additional information on compatibility refer to ISO 11114

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. Chemical safety assessment

Acute toxicity	Toxic by inhalation
Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/irritation	Causes serious eye damage
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available

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Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT-single exposure – Target organ(s)	May cause respiratory tract irritation. Acute oral toxicity - If swallowed, severe burns of the mouth and throat, and danger of perforation of the oesophagus and stomach. Acute inhalation toxicity - burns to mucous membranes, coughing, respiratory failure,
STOT-repeated exposure	No data available
Ingestion hazard	No data available

SECTION 12: Ecological information

12.1. Toxicity

Assessment No data available

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

PBT / vPvB assessment is not available because the chemical safety assessment is not required / is not conducted

12.6. Other adverse effects

May cause pH changes in aqueous ecological systems

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	Must not be released into the atmosphere Burn in a chemical incinerator equipped with an afterburner and scrubber Return to the supplier the product not consumed in its original container
Contaminated container	Eliminate as unused product Contact the supplier if instructions are needed
OMoD Code	16 05 04 Gases in pressure containers containing dangerous substances

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SECTION 14: Transport information

14.1. UN number

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1818	1818	1818

14.2. UN proper shipping name

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
Silicon tetrachloride	Silicon tetrachloride	Silicon tetrachloride

14.3. Transport hazard class(es)

Labelling



ADR/RID
 IMDG
 IATA

8 : Corrosive substances

14.4. Packing group

ADR/RID
 IMDG
 IATA

Not established

14.5. Environmental hazards

ADR/RID

None

IMDG

None

ICAO-TI / IATA-DGR


None

14.6. Special precautions for user

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

This safety data sheet complies with the requirements of Regulation (CE) No. 1907/2006

15.2. Chemical safety assessment

A CSA has not yet been carried out

SECTION 16: Other information

Indication of changes	Revised safety data sheet in accordance with commission regulation (EU) No 2015/830
Abbreviations and acronyms	<p>ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>CAS : Chemical Abstract Service number (USA)</p> <p>CLP : Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</p> <p>CSA : Chemical Safety Assessment</p> <p>EIGA : European Industrial Gases Association</p> <p>EINECS : European Inventory of Existing Commercial Chemical Substances</p> <p>EN : European Standard</p> <p>ATE : Acute Toxicity Estimate</p> <p>IATA : International Air Transport Association</p> <p>IMDG Code : International Maritime Dangerous Goods Code</p> <p>LC50 : Lethal Concentration to 50 % of a test population</p> <p>OMoD : Swiss Ordinance on the movement of waste</p> <p>PBT : Persistent, Bioaccumulative and Toxic</p> <p>PPE: Personal Protection Equipment</p> <p>REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</p> <p>RID : Regulations concerning the international carriage of dangerous goods by rail</p> <p>RMM : Risk Management Measures</p> <p>STOT-SE : Specific Target Organ Toxicity - Single Exposure</p> <p>UN : United Nations</p> <p>vPvB : Very Persistent and Very Bioaccumulative</p> <p>WGK: Water Hazards Class</p>

Full text of H, EUH and P statements used in sections 2 and 3

Hazard statements

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Disclaimer of liability

Details given in this document have been prepared based on the most available reliable documents and are believed to be correct at the time of going to press
They do not claim to be exhaustive and should be considered as a guide