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

1.1. Product identifier

Trade name	Mixture Sulphur dioxide 10% - Nitrogen 90%
Chemical description	Sulphur dioxide 10% - Nitrogen 90%
CAS N°	-
CE N°	-
Index N°	-
Registration n°	-
Chemical formula	SO_2, N_2

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

Relevant identified uses	Industrial and professional Analysis, calibration Laboratory use Contact supplier for more information on uses
Uses advised against	For use by industrial or professional users only

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]

Gases under pressure : Liquefied gas	H280
Skin corrosion/irritation, Category 1B	H314
Serious eye damage Category 1	H318
Acute toxicity (inhalation: gas) Category 4	H332

Specific target organ toxicity (single exposure) Category 3 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 GHS07

Signal word Danger

Hazard statements

H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
EUH071	Corrosive to the respiratory system

Precautionary statements

P280	Wear protective gloves, protective clothing, eye protection, face protection
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+P403	Protect from sunlight. Store in a well-ventilated place
P405	Store locked up

2.3. Other hazards

Exposure may worsen the situation of people with pre-existing eye, skin or respiratory disorders. Prolonged exposure to gas or overexposure to concentrated gas may cause loss of consciousness, possible lung tissue damage, decreased lung function, spinal cord spasm, chemical pneumonitis, throat inflammation (bronchitis) and respiratory paralysis. Contact with the product may cause cold burns or frostbite

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Concentration	Classification
Sulphur dioxide	(CAS-No.) 7446-09-5 (EC-No.) 231-195-2 (EC Index-No.) 016-011-00-9 (Registration-No.) 01-2119485028-34	10%	Press. Gas (Liq.), H280 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 3 (Inhalation: gas), H331
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (Registration-No.) --	90%	Press. Gas (Comp.), H280

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

Treat with corticosteroid spray as soon as possible after inhalation

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product itself does not burn

Water spray or water mist. Dry powder. Foam

Unsuitable extinguishing media

Do not use water jet

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 : sulphur oxides

5.3. Additional information

Wear self-contained breathing apparatus for firefighting, if necessary. (Standard EN137 - Self-contained open-circuit compressed air apparatus with full face mask)

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

Decrease vapour by water spray in the form of fog or fine droplets

6.3. Methods and material for containment and cleaning up

Hose down area with water

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

Wash contaminated equipment or sites of leaks with copious quantities of water

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

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

Content under pressure

7.3. Specific end use(s)

-

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with occupational exposure limits

Component	CAS N°	Exposure value type	Control parameter	Source
Sulphur dioxide	7446-09-5	TWA	0.5 ppm	SUVA: Limit values of exposure to workstations
			1.3 mg/m³	
		OEL	1.0 ppm	SUVA: Limit values of exposure to workstations
			2.7 mg/m³	
Nitrogen	7727-37-9	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 toxic gases may 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 Wear cold insulating gloves when transferring or disconnecting transfer lines Standard EN 511 Wearing chemical resistant gloves Standard EN 374 **For long-term use** Material: Fluoroelastomer Glove thickness: 0.7 mm Penetration time:480 min **For short-term use** Material: Chloroprene rubber Glove thickness: 0.4 mm Penetration time:30 min Have appropriate, chemical-resistant protective clothing ready for use in emergencies. Standard EN943-1
Respiratory protection	Self-contained breathing apparatus (SCBA) or positive pressure air mask must be used in oxygenated atmospheres. Standard EN 137 - Self-contained compressed air device with a full face mask

8.2.3. Environmental exposure controls

Avoid any spill or leak if it can be done safely

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
• **Physical state at 20°C / 101.3kPa**	Gas
• **Colour**	Colourless
Odour	Mixture containing one or more components that have the following odour: Pungent
Odour threshold	No data available
pH	No data available
Melting point / Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Non-flammable
Explosive limits	No data available
Vapour pressure [20°C]	No data available
Vapour pressure [50°C]	No data available

Vapour density	No data available
Relative density, liquid (water=1)	No data available
Relative density, gas (air=1)	1.0912
Water solubility	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

Molar mass	31.6 g/mol
Critical temperature [°C]	No data available
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

No data available

10.4. Conditions to avoid

None under recommended conditions of use and storage

10.5. Incompatible materials

Reacts with water to form corrosive acids
Oxidants
Strong bases
Brass, zinc
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 if inhaled
Skin corrosion/irritation	No adverse effects expected with this product
Serious eye damage/irritation	No data available
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT-single exposure – Target organ(s)	No data available
STOT-repeated exposure	No data available
Ingestion hazard	No data available

11.2. Information on other hazards

The mixture has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Assessment	Classification criteria are not met

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. Endocrine-disrupting properties

The substance/mixture has no endocrine disrupting properties

12.7. Other adverse effects

Effect on the ozone layer: No known effect with this product.
Ozone depletion potential: None.
Effect on global warming: No known effect with this product.
Global warming potential: None

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 05
Gases in pressure containers (including halons) other than those mentioned in 16 05 04

SECTION 14: Transport information

14.1. UN number

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1956	1956	1956

14.2. UN proper shipping name

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
COMPRESSED GAS, N.O.S., (Sulphur dioxide, Nitrogen)	COMPRESSED GAS, N.O.S., (Sulphur dioxide, Nitrogen)	Compressed gas, n.o.s., (Sulphur dioxide, Nitrogen)

14.3. Transport hazard class(es)

Labelling

ADR/RID
IMDG
IATA

2.2 : Non-flammable, non-toxic gases

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

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 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

ADR :	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS :	Chemical Abstract Service number (USA)
CLP :	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CSA :	Chemical Safety Assessment
EIGA :	European Industrial Gases Association
EINECS :	European Inventory of Existing Commercial Chemical Substances
EN :	European Standard
ATE :	Acute Toxicity Estimate
IATA :	International Air Transport Association
IMDG Code :	International Maritime Dangerous Goods Code
LC50 :	Lethal Concentration to 50 % of a test population

OMoD :	Swiss Ordinance on the movement of waste
PBT :	Persistent, Bioaccumulative and Toxic
PPE:	Personal Protection Equipment
REACH :	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID :	Regulations concerning the international carriage of dangerous goods by rail
RMM :	Risk Management Measures
STOT-SE :	Specific Target Organ Toxicity - Single Exposure
UN :	United Nations
vPvB :	Very Persistent and Very Bioaccumulative
WGK:	Water Hazards Class

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

Hazard statements

H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation

Precautionary statements

P280	Wear protective gloves, protective clothing, eye protection, face protection
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+P403	Protect from sunlight. Store in a well-ventilated place
P405	Store locked up

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