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

1.1. Product identifier

Trade name	Mixture 10 PPM HCN in N ₂
Chemical description	Mixture 10 PPM HCN in N ₂
CAS N°	-
CE N°	-
Index N°	-
Registration n°	-
Chemical formula	N ₂ , HCN

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

Relevant identified uses	Industrial and professional Laboratory use Contact supplier for more information on use
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 : Compressed gas

H280

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

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2.2. Label elements

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

Hazard pictograms



GHS04

Signal word

Warning

Hazard statements

H280 Contains gas under pressure; may explode if heated

Precautionary statements

P410+403 Protect from solar radiation. Store in a well-ventilated place

2.3. Other hazards

None

SECTION 3: Composition/information on ingredients

3.1. Substances


Name	Product identifier	Concentration	Classification
Nitrogen	(CAS-No.) 7727-37-9 (EC-No.) 231-783-9 (EC Index-No.) --- (Registration-No.)--	99.999%	Press. Gas (Liq.), H280
Hydrogen cyanide	(CAS-No.) 74-90-8 (EC-No.) 200-821-6 (EC Index-No.) - (Registration-No.)--	0.001%	Flam. Liq. 1 ;H224 Acute Tox. Inha 1 ;H330 Acute Tox. Derm 1 ;H310 Acute Tox. Oral 1 ;H300 STOT RE Oral 1 ;H372 Aquatic Acute 1 ;H400 Aquatic Chronic 1 ;H410

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

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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	No adverse effects expected with this product
In case of eyes contact	In case of direct contact with the eyes, consult a doctor
In case of ingestion	Ingestion is not considered as a possible route of exposure

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

May cause asphyxiation in high concentrations. Symptoms may include loss of consciousness or motor skills. Victim may not be aware of asphyxiation.

Irritating to eyes, respiratory tract and skin. May be harmful if inhalation

Refer to section 11

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

If exposed or concerned: Get medical attention/advice

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product itself does not burn Use extinguishing media appropriate for surrounding fire
Unsuitable extinguishing media	Do not use water jet to extinguish

5.2. Special hazards arising from the substance or mixture

Specific hazards	In the case of fire or excessive heat, hazardous decomposition products may be formed Exposure to fire may cause containers to rupture/explode
Hazardous combustion products	In the case of fire, thermal decomposition can produce toxic and/or corrosive products

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

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Provide adequate ventilation
 Evacuate the staff 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

6.4. Reference to other sections

See also sections 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing vapour or mist.
 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 at temperature below 50°C
 Pressurized contents

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
Nitrogen	7727-37-9	TWA	-	No occupational exposure limit value
			-	
		OEL	-	
			-	

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Hydrogen cyanide	74-90-8	TWA	2 ppm	SUVA: Exposure limit values at the workplace	
			2 mg/m ³		
		OEL	4 ppm		SUVA: Exposure limit values at the workplace
			4 mg/m ³		

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation
Oxygen detectors should be used when asphyxiating gases may be released

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

Eye/face protection	Safety glasses recommended when handling cylinders. Standard EN 166 - Personal eye-protection
Skin / hand protection	Wear protective gloves when handling gas cylinders Standard EN 388 - Protective gloves against mechanical risks Wear cold insulating gloves when transferring or disconnecting transfer lines Standard EN 511 - Cold insulating gloves Have appropriate chemical-resistant protective clothing ready for use in an emergency
Respiratory protection	Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask

8.2.3. Environmental exposure controls

-

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
<ul style="list-style-type: none"> • Physical state at 20°C / 101.3kPa • Colour 	Gas Colourless.
Odour	Data not available
Odour threshold	Data not available
pH	Data not available
Melting point / Freezing point	Data not available

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Boiling point	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability (solid, gas)	Not flammable
Explosive limits	Data not available
Vapour pressure [20°C]	Data not available
Vapour pressure [50°C]	Data not available
Vapour density	Data not available
Relative density, liquid (water=1)	Data not available
Relative density, gas (air=1)	0.9969
Water solubility	Data not available
Partition coefficient n-octanol/water (Log Kow)	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available
Explosive properties	Data not available
Oxidising properties	Data not available

9.2. Other information

Molar mass	28 g/mol
Critical temperature [°C]	Data not available
Relative vapour density	0.9669 Lighter or similar to air

SECTION 10: Stability and reactivity
10.1. Reactivity

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

10.2. Chemical stability


Stable under the recommended storage conditions

10.3. Possibility of hazardous reactions

Data not available

10.4. Conditions to avoid

None under recommended conditions of use and storage

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10.5. Incompatible materials

Data not available
For additional information on compatibility refer to ISO 11114 standard

10.6. Hazardous decomposition products

No hazardous decomposition products under normal conditions of use and storage

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	None
Skin corrosion/irritation	No adverse effects expected from this product
Serious eye damage/irritation	No adverse effects expected from this product
Respiratory or skin sensitisation	Data not available
Germ cell mutagenicity	Data not available
Carcinogenicity	Data not available
Reproductive toxicity	Data not available
STOT-single exposure – Target organ(s)	Data not available
STOT-repeated exposure	Data not available
Ingestion hazard	Data not available

11.2. Information on other hazards

The substance/mixture has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Assessment	There is no information available for the product itself
------------	----------------------------------------------------------

12.2. Persistence and degradability


Data not available

12.3. Bioaccumulative potential

Data not available

12.4. Mobility in soil

Data not available

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12.5. Results of PBT and vPvB assessment

Not classified as PBT or vPvB

12.6. Endocrine disrupting properties

The substance/mixture has no endocrine disrupting properties

12.7. Other adverse effects

This product is not associated with any known ecological toxicological 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 Return unused product to the supplier in its original container
Contaminated container	Return unused product in original cylinder to supplier Contact the supplier if instructions are required
OMoD Code	16 05 05 Gases in pressure containers other than those mentioned in 16 05 04


SECTION 14: Transport information

14.1. UN number

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

14.2. UN proper shipping name

Transport by road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
COMPRESSED GAS, N.O.S., (Nitrogen)	COMPRESSED GAS, N.O.S., (Nitrogen)	COMPRESSED GAS, N.O.S., (Nitrogen)

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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 determined

14.5. Environmental hazards

ADR/RID

None

IMDG

None

ICAO-TI / IATA-DGR

None

14.6. Special precautions for user

-

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 does not need to be carried out for this product


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

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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

Precautionary statements

P410+403 Protect from solar radiation. Store in a well-ventilated place

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