Qualikems Lifesciences Pvt. Ltd.

(Formerly known as Qualikems fine chem Pvt Ltd)
Works : Plot No. 68-69,G.I.D.C Industrial Estate,Nandesari,Vadodara-391340 (Gujarat)
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifiers

Product name : Pyrrolidine

CAS-No. : 123-75-1

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

Details of the supplier of the safety data sheet

Company : Qualikems Lifesciences Pvt Ltd

Works : Plot No. 68.69,G.I.D.C
Industrial Estate, Nandesari,
Vadodara-391340 (Gujarat)

Emergency telephone number

Emergency Phone # : +91-265-2841531 (9:00am - 6:30 pm) [Office hours]

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Skin corrosion (Category 1A), H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302 + H332	Harmful if swallowed or if inhaled
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
Supplemental Hazard Statements	none

Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Tetrahydropyrrole Tetramethyleneimine
Formula	:	C_4H_9N
Molecular weight	:	71.12 g/mol
CAS-No.	:	123-75-1
EC-No.	:	204-648-7

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
Pyrrolidine			
CAS-No.	123-75-1	Flam. Liq. 2; Acute Tox. 4;	<= 100 %
EC-No.	204-648-7	Skin Corr. 1A; H225, H302, H332, H314	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemica of water applied ineffective. Cool all affected containers with flooding

Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx)

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store at Room Temperature.

Storage class (TRGS 510): Flammable Liquids

Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a)	Appearance	Form: liquid Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	12.9 at 100 g/l at 20 °C
e)	Melting point/freezing point	Melting point/range: < -60 °C
f)	Initial boiling point and boiling range	87 - 88 °C at 1013 hPa - lit.
g)	Flash point	3 °C - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 10.6 %(V) Lower explosion limit: 1.6 %(V)
k)	Vapour pressure	48.8 mmHg at 20 °C
l)	Vapour density	2.46 - (Air = 1.0)
m)	Relative density	0.852 g/mL at 25 °C
n)	Water solubility	completely miscible
o)	Partition coefficient: n-octanol/water	log Pow: 0.22
p)	Auto-ignition temperature	No data available

q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

Other safety information

Relative vapour density 2.46 - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials
Acid chlorides, Acid anhydrides, Strong oxidizing agents, Carbon dioxide (CO2), Acids

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 433 mg/kg(Pyrrolidine)
LC50 Inhalation - Rat - 4 h - 11.7 mg/l(Pyrrolidine)

Skin corrosion/irritation
No data available(Pyrrolidine)

Serious eye damage/eye irritation
No data available(Pyrrolidine)

Respiratory or skin sensitisation
No data available(Pyrrolidine)

Germ cell mutagenicity
No data available(Pyrrolidine)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available(Pyrrolidine)

Specific target organ toxicity - single exposure
No data available(Pyrrolidine)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(Pyrrolidine)

Additional Information
RTECS: UX9650000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea(Pyrrolidine)

SECTION 12: Ecological information

Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - 100 - 220 mg/l - 96 h(Pyrrolidine)

Persistence and degradability
No data available(Pyrrolidine)

Bioaccumulative potential
Does not bioaccumulate.

Mobility in soil
No data available(Pyrrolidine)

Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects
Harmful to aquatic life.

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

UN number
ADR/RID: 1922 IMDG: 1922 IATA: 1922

UN proper shipping name
ADR/RID: PYRROLIDINE
IMDG: PYRROLIDINE
IATA: Pyrrolidine

14.3 Transport hazard class(es)
ADR/RID: 3 (8) IMDG: 3 (8) IATA: 3 (8)

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Qualikems Lifesciences Pvt. Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.qualikems.com for additional terms and conditions of sale.