



**Qualikems**

# 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 : **Nitro Benzene**

CAS-No. : **98-95-3**

### 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

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Carcinogenicity (Category 2), H351

Reproductive toxicity (Category 1B), H360F

Specific target organ toxicity - repeated exposure (Category 1), Blood, H372

Chronic aquatic toxicity (Category 3), H412

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



Acute toxicity Aspiration hazard

Signal word

Danger

Hazard statement(s)	
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled
H351	Suspected of causing cancer.
H360F	May damage fertility.
H372	Causes damage to organs (Blood) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 + P310	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician.
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none
Restricted to professional users.	

#### 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. Rapidly absorbed through skin.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Formula	:	C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>
Molecular weight	:	123,11 g/mol
CAS-No.	:	98-95-3
EC-No.	:	202-716-0
Index-No.	:	609-003-00-7

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

Component		Classification	Concentration
<b>Nitrobenzene</b>			
CAS-No.	98-95-3	Acute Tox. 3; Carc. 2; Repr.	<= 100 %
EC-No.	202-716-0	1B; STOT RE 1; Aquatic	
Index-No.	609-003-00-7	Chronic 3; H301, H331, H311, H351, H360F, H372, H412	

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

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**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**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

**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**

Wear respiratory protection. 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). Keep in suitable, closed containers for disposal.

**Reference to other sections**

For disposal see section 13.

**SECTION 7: Handling and storage****Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

**Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under nitrogen.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

## 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

#### Components with workplace control parameters

### Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses 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, 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 a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of 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, clear Colour: colourless, yellow
b) Odour	pungent
c) Odour Threshold	No data available
d) pH	8,0 - 8,5 at 1,00000 g/l at 20,0 °C
e) Melting point/freezing point	Melting point/range: 5 - 6 °C - lit.
f) Initial boiling point and boiling range	210 - 211 °C - lit.
g) Flash point	88,0 °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: 40 %(V) Lower explosion limit: 1,8 %(V)
k) Vapour pressure	66,7 hPa at 120,0 °C 0,3 hPa at 20,0 °C

l)	Vapour density	No data available
m)	Relative density	1,196 g/cm <sup>3</sup> at 25 °C
n)	Water solubility	1,9 g/l at 20 °C
o)	Partition coefficient: n-octanol/water	log Pow: 1,86 at 24,5 °C
p)	Auto-ignition temperature	482,0 °C
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

Surface tension	43,4 mN/m at 20,0 °C
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### 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.

#### Incompatible materials

Strong oxidizing agents, Strong reducing agents, Strong bases

#### Hazardous decomposition products

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 - male - 588 mg/kg

LC50 Inhalation - Rat - 4 h - 556 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation.

Behavioral:Tremor. Cyanosis

LD50 Dermal - Rabbit - 760 mg/kg

##### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

##### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

##### Respiratory or skin sensitisation

- Mouse

Result: Did not cause sensitisation on laboratory animals.

(OECD Test Guideline 429)

**Germ cell mutagenicity**

unscheduled DNA synthesis assay

rat hepatocytes

Result: negative

OECD Test Guideline 474

Mouse - male and female

Result: negative

**Carcinogenicity**

Suspected human carcinogens

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Nitrobenzene)

**Reproductive toxicity**

Presumed human reproductive toxicant

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Inhalation - Causes damage to organs through prolonged or repeated exposure. - Blood

Inhalation - Blood

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity Rat - male and female - Oral - 28 d - LOAEL : 5 mg/kg

Rat - male and female - Inhalation - 14 d - NOAEL : 0,625 mg/l - LOAEL : < 0,05 mg/l - OECD Test Guideline 412

RTECS: DA6475000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated., Absorption into the body leads to the formation of methemoglobin which in

sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Exposure to and/or consumption of alcohol may increase toxic effects.

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish flow-through test LC50 - Danio rerio (zebra fish) - 92 mg/l - 96,0 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 35 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 - Chlorella pyrenoidosa - 18 mg/l - 96 h (OECD Test Guideline 201)

**Persistence and degradability**

Biodegradability aerobic - Exposure time 14 d  
Result: 3,3 % - Not readily biodegradable.  
(OECD Test Guideline 301C)

**Bioaccumulative potential**

Bioaccumulation Cyprinus carpio (Carp) - 42 d  
at 25 °C - 0,125 mg/l

Bioconcentration factor (BCF): 3,1 - 4,8  
(OECD Test Guideline 305C)

**Mobility in soil**

No data available

**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 with long lasting effects.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 1662

IMDG: 1662

IATA: 1662

**14.2 UN proper shipping name**

ADR/RID: NITROBENZENE

IMDG: NITROBENZENE

IATA: Nitrobenzene

**14.3 Transport hazard class(es)**

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: yes

IMDG Marine pollutant: yes

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.

**Authorisations and/or restrictions on use**

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : 202-716-0

**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.

H301	Toxic if swallowed.
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H351	Suspected of causing cancer.
H360F	May damage fertility.
H372	Causes damage to organs (/\$/*_ORGAN_REPEAT/\$/) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

### 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](http://www.qualikems.com) for additional terms and conditions of sale.