

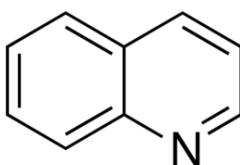
CAS No: 91-22-5 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Substance  
 :  
 EC no : 202-051-6  
 CAS No : 91-22-5  
 Product code : 05542  
 Chemical structure :



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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.  
 107 Wode House Road, Jehangir Villa, Colaba  
 400005 Mumbai - INDIA  
 T +91 22 6663 6663 - F +91 22 6663 6699  
[info@lobachemie.com](mailto:info@lobachemie.com) - [www.lobachemie.com](http://www.lobachemie.com)

#### 1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302  
 Acute toxicity (dermal), Category 3 H311  
 Skin corrosion/irritation, Category 2 H315  
 Serious eye damage/eye irritation, Category 2 H319  
 Germ cell mutagenicity, Category 2 H341  
 Carcinogenicity, Category 1A H350

# QUINOLINE FOR SYNTHESIS

## Safety Data Sheet

Hazardous to the aquatic environment — Chronic Hazard, Category 2 H411

Full text of classification categories and H statements : see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R45  
Muta.Cat.3; R68  
Xn; R21/22  
Xi; R36/38  
N; R51/53

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS06

GHS08

GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H302 - Harmful if swallowed  
H311 - Toxic in contact with skin  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H341 - Suspected of causing genetic defects  
H350 - May cause cancer  
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P201 - Obtain special instructions before use  
P273 - Avoid release to the environment  
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  
P308+P313 - IF exposed or concerned: Get medical advice/attention

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : QUINOLINE FOR SYNTHESIS  
CAS No : 91-22-5

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EC no : 202-051-6

Full text of R- and H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Immediately call a POISON CENTER or doctor/physician. Specific measures (see ... on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see ... on this label). Gently wash with plenty of soap and water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries : May cause damage to organs.

Symptoms/injuries after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Avoid breathing dust/fume/gas/mist/vapours/spray.

Emergency procedures : Stop release. Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment.

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### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing.  
Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment : Wash ... thoroughly after handling.  
Hand protection : protective gloves  
Eye protection : Chemical goggles or safety glasses  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : Wear respiratory protection  
Other information : Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Colour : Colourless to brown.  
Odour : peculiar odor.  
Odour threshold : No data available  
pH : 7.3  
Relative evaporation rate (butylacetate=1) : No data available  
Melting point : -17 --13  
Freezing point : No data available

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|                                  |   |
|----------------------------------|---|
| Boiling point                    | : 113 - 114                             |
| Flash point                      | : 101 °C                                |
| Auto-ignition temperature        | : 1 mm Hg @59.70C                       |
| Decomposition temperature        | : No data available                     |
| Flammability (solid, gas)        | : No data available                     |
| Vapour pressure                  | : 0.09 hPa at 20 °C                     |
| Relative vapour density at 20 °C | : 4.46                                  |
| Relative density                 | : No data available                     |
| Density                          | : 1.093 g/cm <sup>3</sup>               |
| Solubility                       | : Water: Slightly soluble in cold water |
| Log Pow                          | : No data available                     |
| Viscosity, kinematic             | : No data available                     |
| Viscosity, dynamic               | : No data available                     |
| Explosive properties             | : No data available                     |
| Oxidising properties             | : No data available                     |
| Explosive limits                 | : No data available                     |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Toxic in contact with skin.

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|   |   |
|---|---|
| Skin corrosion/irritation                           | : Causes skin irritation.<br>pH: 7.3                  |
| Serious eye damage/irritation                       | : Causes serious eye irritation.<br>pH: 7.3           |
| Respiratory or skin sensitisation                   | : Not classified                                      |
| Germ cell mutagenicity                              | : Suspected of causing genetic defects.               |
| Carcinogenicity                                     | : May cause cancer.                                   |
| Reproductive toxicity                               | : Not classified                                      |
| Specific target organ toxicity (single exposure)    | : Not classified                                      |
| Specific target organ toxicity (repeated exposure)  | : Not classified                                      |
| Aspiration hazard                                   | : Not classified                                      |
| Potential adverse human health effects and symptoms | : Harmful if swallowed. Harmful in contact with skin. |

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

#### 12.2. Persistence and degradability

##### QUINOLINE FOR SYNTHESIS (91-22-5)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

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### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 2656 |
| UN-No. (IMDG) | : 2656 |
| UN-No.(IATA)  | : 2656 |
| UN-No.(ADN)   | : 2656 |
| UN-No. (RID)  | : 2656 |

#### 14.2. UN proper shipping name

|                                       |   |
|---------------------------------------|---|
| Proper Shipping Name (ADR)            | : QUINOLINE   |
| Proper Shipping Name (IMDG)           | : QUINOLINE   |
| Proper Shipping Name (IATA)           | : QUINOLINE   |
| Proper Shipping Name (ADN)            | : QUINOLINE   |
| Proper Shipping Name (RID)            | : QUINOLINE   |
| Transport document description (ADR)  | : UN 2656 QUINOLINE, 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS             |
| Transport document description (IMDG) | : UN 2656 QUINOLINE, 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IATA) | : UN 2656 QUINOLINE, 6.1, III, ENVIRONMENTALLY HAZARDOUS                  |
| Transport document description (ADN)  | : UN 2656 QUINOLINE, 6.1, III, ENVIRONMENTALLY HAZARDOUS                  |
| Transport document description (RID)  | : UN 2656 QUINOLINE, 6.1, III, ENVIRONMENTALLY HAZARDOUS                  |

#### 14.3. Transport hazard class(es)

##### ADR

|                                  |       |
|----------------------------------|-------|
| Transport hazard class(es) (ADR) | : 6.1 |
| Danger labels (ADR)              | : 6.1 |



##### IMDG

|                                   |       |
|-----------------------------------|-------|
| Transport hazard class(es) (IMDG) | : 6.1 |
| Danger labels (IMDG)              | : 6.1 |



##### IATA

|                                   |       |
|-----------------------------------|-------|
| Transport hazard class(es) (IATA) | : 6.1 |
| Hazard labels (IATA)              | : 6.1 |



##### ADN

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Transport hazard class(es) (ADN) : 6.1  
Danger labels (ADN) : 6.1



### RID

Transport hazard class(es) (RID) : 6.1  
Danger labels (RID) : 6.1



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes  
Other information : No supplementary information available

### 14.6. Special precautions for user


#### - Overland transport

Classification code (ADR) : T1  
Limited quantities (ADR) : 5L  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4  
Portable tank and bulk container special provisions (ADR) : TP1  
Tank code (ADR) : L4BH  
Tank special provisions (ADR) : TU15, TE19  
Vehicle for tank carriage : AT  
Transport category (ADR) : 2  
Special provisions for carriage - Packages (ADR) : V12  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28  
Special provisions for carriage - Operation (ADR) : S9  
Hazard identification number (Kemler No.) : 60



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Orange plates : 

Tunnel restriction code (ADR) : E  
EAC code : 2X

### - Transport by sea

Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-A  
Stowage category (IMDG) : A  
Stowage and handling (IMDG) : SW1, H2  
MFAG-No : 154

### - Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y642  
PCA limited quantity max net quantity (IATA) : 2L  
PCA packing instructions (IATA) : 655  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 663  
CAO max net quantity (IATA) : 220L  
ERG code (IATA) : 6L

### - Inland waterway transport

Classification code (ADN) : T1  
Special provisions (ADN) : 802  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Equipment required (ADN) : PP, EP, TOX, A  
Ventilation (ADN) : VE02  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : T1  
Limited quantities (RID) : 5L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1  
Tank codes for RID tanks (RID) : L4BH  
Special provisions for RID tanks (RID) : TU15  
Transport category (RID) : 2  
Special provisions for carriage – Packages (RID) : W12

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Special provisions for carriage – Loading and unloading (RID) : CW13, CW28, CW31  
Colis express (express parcels) (RID) : CE8  
Hazard identification number (RID) : 60

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions  
QUINOLINE FOR SYNTHESIS is not on the REACH Candidate List  
QUINOLINE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 2, hazardous to water (Classification according to VwVwS, Annex 2; WGK No 1299)  
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

|                       |   |
|-----------------------|---|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3                               |
| Acute Tox. 4 (Oral)   | Acute toxicity (oral), Category 4                                 |
| Aquatic Chronic 2     | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Carc. 1A              | Carcinogenicity, Category 1A                                      |

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|               |  |
|---------------|--|
| Eye Irrit. 2  | Serious eye damage/eye irritation, Category 2  |
| Muta. 2       | Germ cell mutagenicity, Category 2   |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2  |
| H302          | Harmful if swallowed   |
| H311          | Toxic in contact with skin   |
| H315          | Causes skin irritation   |
| H319          | Causes serious eye irritation  |
| H341          | Suspected of causing genetic defects   |
| H350          | May cause cancer   |
| H411          | Toxic to aquatic life with long lasting effects  |
| R21/22        | Harmful in contact with skin and if swallowed  |
| R36/38        | Irritating to eyes and skin  |
| R45           | May cause cancer   |
| R51/53        | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R68           | Possible risk of irreversible effects  |
| N             | Dangerous for the environment  |
| Xi            | Irritant   |
| Xn            | Harmful  |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*