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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC Index-No.</td>
<td>610-005-00-5</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-809-6</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>100-00-5</td>
</tr>
<tr>
<td>Product code</td>
<td>02766</td>
</tr>
<tr>
<td>Chemical structure</td>
<td><img src="image" alt="Chemical structure of 1-CHLORO-4-NITROBENZENE" /></td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses

| Industrial/Professional use spec | Industrial For professional use only |

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 - 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 (dermal), Category 3 |
| Acute toxicity (inhal.), Category 3 |
| Acute toxicity (oral), Category 3 |
H311
H331
H301
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS
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Carcinogenicity, Category 2: H351
Germ cell mutagenicity, Category 2: H341
Specific target organ toxicity — Repeated exposure, Category 2: H373
Hazardous to the aquatic environment — Chronic Hazard, Category 2: H411

Full text of H statements: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Carc. Cat. 3; R40
Muta. Cat. 3; R68
T; R23/24/25
Xn; R48/20/21/22
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):

Signal word (CLP): Danger
Hazard statements (CLP):
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H341 - Suspected of causing genetic defects.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP):
P261 - Avoid breathing vapours, spray, dust, fume, gas.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor
P311 - Call a POISON CENTER/doctor

2.3. Other hazards
No additional information available
SECTION 3: Composition/information on ingredients

3.1. Substances

Name: 1-CHLORO-4-NITROBENZENE FOR SYNTHESIS
CAS-No.: 100-00-5
EC-No.: 202-809-6
EC Index-No.: 610-005-00-5

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Suspected of causing cancer.
First-aid measures after inhalation: Assure fresh air breathing. If breathing is difficult, 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/doctor. Take off immediately all contaminated clothing. Wash with plenty of water/…. Wash contaminated clothing before reuse.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion: Rinse mouth. Obtain emergency medical attention.

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

Symptoms/effects: Suspected of causing genetic defects. Causes damage to organs.
Symptoms/effects after skin contact: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/effects after ingestion: Toxic if swallowed. 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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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 enter fire area without proper protective equipment, including respiratory protection.

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: Use personal protective equipment as required.
### Emergency procedures
Ventilate area.

### 6.2. Environmental precautions
Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.

### 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 breathe vapours. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes.

**Hygiene measures:** Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

**Storage conditions:** Store in a well-ventilated place. Keep container tightly closed.

### 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

<table>
<thead>
<tr>
<th>Protection Type</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand protection</td>
<td>Protective gloves</td>
</tr>
<tr>
<td>Eye protection</td>
<td>Chemical goggles or safety glasses</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>Wear suitable protective clothing</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>[In case of inadequate ventilation] wear respiratory protection.</td>
</tr>
</tbody>
</table>

#### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>157.56 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Lemon yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
</tbody>
</table>
# 1-CHLORO-4-NITROBENZENE FOR SYNTHESIS

## Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>80 - 83 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>242 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>124 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>510 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.298 g/cm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>2.6</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 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.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid


#### 10.5. Incompatible materials

Oxidizing agent.

#### 10.6. Hazardous decomposition products

No additional information available
### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Dermal: Toxic in contact with skin. Inhalation: Toxic if inhaled. Oral: Toxic if swallowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Suspected of causing genetic defects.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Potential adverse human health effects and symptoms**: Toxic if swallowed. Toxic 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

<table>
<thead>
<tr>
<th>1-CHLORO-4-NITROBENZENE FOR SYNTHESIS (100-00-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>1-CHLORO-4-NITROBENZENE FOR SYNTHESIS (100-00-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>Product/Packaging disposal recommendations</th>
<th>ecology - Waste materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.</td>
<td>Hazardous waste due to toxicity.</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

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

#### 14.1. UN number

<table>
<thead>
<tr>
<th>UN-No. (ADR)</th>
<th>UN-No. (IMDG)</th>
<th>UN-No. (IATA)</th>
<th>UN-No. (ADN)</th>
<th>UN-No. (RID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1578</td>
<td>1578</td>
<td>1578</td>
<td>1578</td>
<td>1578</td>
</tr>
</tbody>
</table>

#### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Proper Shipping Name (ADR)</th>
<th>Proper Shipping Name (IMDG)</th>
<th>Proper Shipping Name (IATA)</th>
<th>Proper Shipping Name (ADN)</th>
<th>Proper Shipping Name (RID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHLORONITROBENZENES, SOLID</td>
<td>CHLORONITROBENZENES, SOLID</td>
<td>Chloronitrobenzenes, solid</td>
<td>CHLORONITROBENZENES, SOLID</td>
<td>CHLORONITROBENZENES, SOLID</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 1578 CHLORONITROBENZENES, SOLID, 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1578 CHLORONITROBENZENES, SOLID, 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1578 Chloronitrobenzenes, solid, 6.1, II, ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1578 CHLORONITROBENZENES, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS</td>
<td>UN 1578 CHLORONITROBENZENES, SOLID, 6.1, II, ENVIRONMENTALLY HAZARDOUS</td>
</tr>
</tbody>
</table>

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

**ADR**

<table>
<thead>
<tr>
<th>Transport hazard class(es) (ADR)</th>
<th>Danger labels (ADR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>6.1</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th>Transport hazard class(es) (IMDG)</th>
<th>Danger labels (IMDG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>6.1</td>
</tr>
</tbody>
</table>
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS
Safety Data Sheet

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

ADN
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) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

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) : T2
Special provisions (ADR) : 279
Limited quantities (ADR) : 500g
Exceptioned quantities (ADR) : E4
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B4
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T3
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS
Safety Data Sheet

- Portable tank and bulk container special provisions (ADR)
  Tank code (ADR) : TP33
  Tank special provisions (ADR) : SGAH
  Vehicle for tank carriage : AT
  Transport category (ADR) : 2
  Special provisions for carriage - Packages (ADR) : V11
  Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
  Special provisions for carriage - Operation (ADR) : S9, S19
  Hazard identification number (Kemler No.) : 60
  Orange plates :

- Tunnel restriction code (ADR) : D/E
- EAC code : 2X

- Transport by sea
  Special provisions (IMDG) : 279
  Packing instructions (IMDG) : P002
  IBC packing instructions (IMDG) : IBC08
  IBC special provisions (IMDG) : B21, B4
  Tank instructions (IMDG) : T3
  Tank special provisions (IMDG) : TP33
  EmS-No. (Fire) : F-A
  EmS-No. (Spillage) : S-A
  Stowage category (IMDG) : A
  Properties and observations (IMDG) : Yellow crystals. Melting point: approximately 30°C to 80°C. Toxic if swallowed, by skin contact or by dust inhalation.
  MFAG-No : 152

- Air transport
  PCA Excepted quantities (IATA) : E4
  PCA Limited quantities (IATA) : Y644
  PCA limited quantity max net quantity (IATA) : 1kg
  PCA packing instructions (IATA) : 669
  PCA max net quantity (IATA) : 25kg
  CAO packing instructions (IATA) : 676
  CAO max net quantity (IATA) : 100kg
  Special provisions (IATA) : A113
  ERG code (IATA) : 6L

- Inland waterway transport
  Classification code (ADN) : T2
  Special provisions (ADN) : 279, 802
  Limited quantities (ADN) : 500 g
  Excepted quantities (ADN) : E4
  Carriage permitted (ADN) : T
  Equipment required (ADN) : PP, EP, TOX, A
  Ventilation (ADN) : VE02
  Number of blue cones/lights (ADN) : 2
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS
Safety Data Sheet

- Rail transport

Classification code (RID) : T2
Special provisions (RID) : 279
Excepted quantities (RID) : E4
Packing instructions (RID) : P002, IBC08
Special packing provisions (RID) : B4
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T3
Portable tank and bulk container special provisions (RID) : T3
Tank codes for RID tanks (RID) : SGAH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W11
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
Colis express (express parcels) (RID) : CE9
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
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS is not on the REACH Candidate List
1-CHLORO-4-NITROBENZENE FOR SYNTHESIS is not on the REACH Annex XIV List

15.1.2. National regulations

Germany
Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV; ID No. 233)

Netherlands
SZW-lijest van kankerverwekkende stoffen : The substance is not listed
SZW-lijest van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbbaarheid : The substance is not listed
15.2. Chemical safety assessment

No additional information available

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

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Dermal)</th>
<th>Acute toxicity (dermal), Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3 (Inhalation)</td>
<td>Acute toxicity (inhal.), Category 3</td>
</tr>
<tr>
<td>Acute Tox. 3 (Oral)</td>
<td>Acute toxicity (oral), Category 3</td>
</tr>
<tr>
<td>Aquatic Chronic 2</td>
<td>Hazardous to the aquatic environment — Chronic Hazard, Category 2</td>
</tr>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity, Category 2</td>
</tr>
<tr>
<td>Muta. 2</td>
<td>Germ cell mutagenicity, Category 2</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity — Repeated exposure, Category 2</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin.</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled.</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects.</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer.</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>R23/24/25</td>
<td>Toxic by inhalation, in contact with skin and if swallowed</td>
</tr>
<tr>
<td>R40</td>
<td>Limited evidence of a carcinogenic effect</td>
</tr>
<tr>
<td>R48/20/21/22</td>
<td>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed</td>
</tr>
<tr>
<td>R51/53</td>
<td>Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment</td>
</tr>
<tr>
<td>R68</td>
<td>Possible risk of irreversible effects</td>
</tr>
<tr>
<td>N</td>
<td>Dangerous for the environment</td>
</tr>
<tr>
<td>T</td>
<td>Toxic</td>
</tr>
<tr>
<td>Xn</td>
<td>Harmful</td>
</tr>
</tbody>
</table>

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.