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

1.1. Product identifier

Product form: Substance
CAS-No.: 350-46-9
Product code: 3858D
Formula: C6H4FNO2
Chemical structure:

NO₂
F

Synonyms: p-Fluronitrobenzene, p-Nitrofluorobenzene

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 (oral), Category 4: H302
Acute toxicity (dermal), Category 4: H312
Acute toxicity (inhalation: gas) Category 3: H331
1-FLUORO-4-NITROBENZENE FOR SYNTHESIS
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Specific target organ toxicity — Repeated exposure, Category 2

Full text of H statements: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Xn; R20/21/22
R33
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

Signal word (CLP): Danger

Hazard statements (CLP): H302+H312 - Harmful if swallowed or in contact with skin
H331 - Toxic if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP): P261 - Avoid breathing dust, fume, gas, spray, vapours, mist.
P280 - Wear protective clothing, protective gloves, eye protection, face protection.
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-FLUORO-4-NITROBENZENE FOR SYNTHESIS
CAS-No.: 350-46-9

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 after inhalation: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact: Immediately call a POISON CENTER/doctor. Specific measures (see supplemental first aid instruction on this label). 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 immediate medical advice/attention.

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

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

Symptoms/effects: May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation: Harmful if inhaled.

Symptoms/effects after skin contact: Harmful in contact with skin.

Symptoms/effects after ingestion: Harmful if swallowed.

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

Treat symptomatically.

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: 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with skin and eyes. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour.
## 1-FLUORO-4-NITROBENZENE FOR SYNTHESIS

### Safety Data Sheet

<table>
<thead>
<tr>
<th>Section</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygiene measures</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>7.2. Conditions for safe storage, including any incompatibilities</strong></td>
<td>Storage conditions: Keep container tightly closed. Store in a well-ventilated place. Keep cool.</td>
</tr>
<tr>
<td><strong>7.3. Specific end use(s)</strong></td>
<td>No additional information available</td>
</tr>
<tr>
<td><strong>SECTION 8: Exposure controls/personal protection</strong></td>
<td><strong>8.1. Control parameters</strong></td>
</tr>
<tr>
<td></td>
<td>No additional information available</td>
</tr>
<tr>
<td><strong>8.2. Exposure controls</strong></td>
<td><strong>Hand protection</strong>: Protective gloves</td>
</tr>
<tr>
<td></td>
<td><strong>Eye protection</strong>: Chemical goggles or safety glasses</td>
</tr>
<tr>
<td></td>
<td><strong>Skin and body protection</strong>: Wear suitable protective clothing</td>
</tr>
<tr>
<td></td>
<td><strong>Respiratory protection</strong>: [In case of inadequate ventilation] wear respiratory protection.</td>
</tr>
<tr>
<td><strong>SECTION 9: Physical and chemical properties</strong></td>
<td><strong>9.1. Information on basic physical and chemical properties</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Physical state</strong>: Liquid</td>
</tr>
<tr>
<td></td>
<td><strong>Molecular mass</strong>: 141.1 g/mol</td>
</tr>
<tr>
<td></td>
<td><strong>Colour</strong>: Yellow</td>
</tr>
<tr>
<td></td>
<td><strong>Odour</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Odour threshold</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>pH</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Relative evaporation rate (butylacetate=1)</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Melting point</strong>: 21 °C</td>
</tr>
<tr>
<td></td>
<td><strong>Freezing point</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Boiling point</strong>: 205 °C</td>
</tr>
<tr>
<td></td>
<td><strong>Flash point</strong>: 90 °C</td>
</tr>
<tr>
<td></td>
<td><strong>Auto-ignition temperature</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Decomposition temperature</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Flammability (solid, gas)</strong>: No data available</td>
</tr>
<tr>
<td></td>
<td><strong>Vapour pressure</strong>: 5.5 mm Hg at 700°C</td>
</tr>
<tr>
<td></td>
<td><strong>Relative vapour density at 20 °C</strong>: &gt; 1</td>
</tr>
</tbody>
</table>
### 1-FLUORO-4-NITROBENZENE FOR SYNTHESIS
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.34 g/cm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>1.8</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**
Direct sunlight. Extremely high or low temperatures.

**10.5. Incompatible materials**
Strong acids. Strong bases.

**10.6. Hazardous decomposition products**
No additional information available

#### SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: gas: Toxic if inhaled.</td>
</tr>
<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>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</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>
</tbody>
</table>
1-FLUORO-4-NITROBENZENE FOR SYNTHESIS

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Additional information: There are potential chronic health effects to consider

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
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>1-FLUORO-4-NITROBENZENE FOR SYNTHESIS (350-46-9)</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
Product/Packaging disposal recommendations: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

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

14.1. UN number
UN-No. (ADR): 2811
UN-No. (IMDG): 2811
UN-No. (IATA): 2811
UN-No. (ADN): 2811
UN-No. (RID): 2811

14.2. UN proper shipping name
Proper Shipping Name (ADR): TOXIC SOLID, ORGANIC, N.O.S.
# 1-FLUORO-4-NITROBENZENE FOR SYNTHESIS

## Safety Data Sheet

<table>
<thead>
<tr>
<th>Proper Shipping Name (IMDG)</th>
<th>TOXIC SOLID, ORGANIC, N.O.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>Toxic solid, organic, n.o.s.</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
<td>TOXIC SOLID, ORGANIC, N.O.S.</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
<td>TOXIC SOLID, ORGANIC, N.O.S.</td>
</tr>
<tr>
<td>Transport document description (ADR)</td>
<td>UN 2811 TOXIC SOLID, ORGANIC, N.O.S., 6.1, III, (E)</td>
</tr>
<tr>
<td>Transport document description (IMDG)</td>
<td>UN 2811 TOXIC SOLID, ORGANIC, N.O.S., 6.1, III</td>
</tr>
<tr>
<td>Transport document description (IATA)</td>
<td>UN 2811 Toxic solid, organic, n.o.s., 6.1, III</td>
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<tr>
<td>Transport document description (ADN)</td>
<td>UN 2811 TOXIC SOLID, ORGANIC, N.O.S., 6.1, III</td>
</tr>
<tr>
<td>Transport document description (RID)</td>
<td>UN 2811 TOXIC SOLID, ORGANIC, N.O.S., 6.1, III</td>
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</table>

### 14.3. Transport hazard class(es)

**ADR**

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

**IMDG**

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

**IATA**

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

**ADN**

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

**RID**

<table>
<thead>
<tr>
<th>Transport hazard class(es) (RID)</th>
<th>6.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger labels (RID)</td>
<td>6.1</td>
</tr>
</tbody>
</table>
14.4. Packing group

<table>
<thead>
<tr>
<th>Packing group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (ADR)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (IMDG)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (RID)</td>
<td>III</td>
</tr>
</tbody>
</table>

14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
<td>: No</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>: No</td>
<td></td>
</tr>
<tr>
<td>Other information</td>
<td>: No supplementary information available</td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

- **Overland transport**
  - Classification code (ADR): T2
  - Special provisions (ADR): 274, 614
  - Limited quantities (ADR): 5kg
  - Excepted quantities (ADR): E1
  - Packing instructions (ADR): P002, IBC08, LP02, R001
  - Special packing provisions (ADR): B3
  - Mixed packing provisions (ADR): MP10
  - Portable tank and bulk container instructions (ADR): T1
  - Portable tank and bulk container special provisions (ADR): TP33
  - Tank code (ADR): SGAH, L4BH
  - Tank special provisions (ADR): TU15, TE19
  - Vehicle for tank carriage: AT
  - Transport category (ADR): 2
  - Special provisions for carriage - Bulk (ADR): VC1, VC2, AP7
  - Special provisions for carriage - Loading, unloading and handling (ADR): CV13, CV28
  - Special provisions for carriage - Operation (ADR): S9
  - Hazard identification number (Kemler No.): 60
  - Orange plates: 60 2811
  - Tunnel restriction code (ADR): E
  - EAC code: 2X

- **Transport by sea**
  - Special provisions (IMDG): 223, 274
  - Packing instructions (IMDG): P002
  - IBC packing instructions (IMDG): IBC08
  - IBC special provisions (IMDG): B3
  - Tank instructions (IMDG): T1
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Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Stowage category (IMDG) : A
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.
MFAG-No : 154

- Air transport
PCA Exected quantities (IATA) : E1
PCA Limited quantities (IATA) : Y645
PCA limited quantity max net quantity (IATA) : 10kg
PCA packing instructions (IATA) : 670
PCA max net quantity (IATA) : 100kg
CAO packing instructions (IATA) : 677
CAO max net quantity (IATA) : 200kg
Special provisions (IATA) : A3, A5
ERG code (IATA) : 6L

- Inland waterway transport
Classification code (ADN) : T2
Special provisions (ADN) : 274, 614, 802
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

- Rail transport
Classification code (RID) : T2
Special provisions (RID) : 274, 614
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, LP02, R001
Special packing provisions (RID) : B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAH, L4BH
Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP7
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31
Colis express (express parcels) (RID) : CE11
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
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No REACH Annex XVII restrictions
1-FLUORO-4-NITROBENZENE FOR SYNTHESIS is not on the REACH Candidate List
1-FLUORO-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) 1, low hazard to water (Classification according to AwSV; ID No. 6557)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen: The substance is not listed
SZW-lijst 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 – Vruchtbaarheid: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

Denmark
Class for fire hazard: Class III-1
Store unit: 50 liter
Classification remarks: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

<table>
<thead>
<tr>
<th>Statement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3 (Inhalation/gas)</td>
<td>Acute toxicity (inhalation:gas) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal), Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>Specific target organ toxicity — Repeated exposure, Category 2</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>
**1-FLUORO-4-NITROBENZENE FOR SYNTHESIS**

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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H312</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled.</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>R20/21/22</td>
<td>Harmful by inhalation, in contact with skin and if swallowed</td>
</tr>
<tr>
<td>R33</td>
<td>Danger of cumulative effects</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.*