1. Identification of the substances/mixture and of the company/undertaking

1.1 Product Identifiers
Product Code    GRM6806
Product Name    1-Chloro-4-nitrobenzene

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses    Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Produced by    HiMedia Laboratories Pvt. Ltd.
Address    23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.
Tel. No.    +91-22-2500 0970, +91-22-2500 1607
Fax No.    +91-22-2500 2468

1.4 Emergency Tel. No.
Emergency Tel.No.    Please contact the regional HiMedia representation in your country

2. Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Germ cell mutagenicity (Category 2)
Carcinogenicity (Category 2)
Specific target organ toxicity, repeated exposure (Category 2)
Hazardous to the aquatic environment, long-term hazard (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Toxic by inhalation, in contact with skin and if swallowed.
Limited evidence of a carcinogenic effect.
Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Possible risk of irreversible effects.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word    Danger

Hazard Statement(s)
H301    Toxic if swallowed
H311    Toxic in contact with skin
H331    Toxic if inhaled
H341    Suspected of causing genetic defects
H351    Suspected of causing cancer
H373    Causes damage to organs through prolonged or repeated exposure
H411    Toxic to aquatic life with long lasting effects

Precautionary Statement(s)
P261    Avoid breathing dust/fume/gas/mist/vapours/spray.
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 or doctor/physician.
P311 Call a POISON CENTER or doctor/physician.


Symbol(s)

R-Phrase(s)
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R40 Limited evidence of a carcinogenic effect.
R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68 Possible risk of irreversible effects.

S-Phrase(s)
S28 After contact with skin, wash immediately with plenty of soap-suds.
S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

2.3 Other hazards - none

3. Composition/Information on Ingredients

3.1 Substances

Molecular Formula \(\text{C}_6\text{H}_4\text{ClNO}_2\)
Molecular Weight. 157.55

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Chloro-4-nitrobenzene</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>100-00-5</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-809-6</td>
</tr>
</tbody>
</table>

4. First Aid Measures

4.1 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. 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
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
No data available

4.3 Indication of immediate medical attention and special treatment needed
No data available
5. Fire Fighting Measures
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.3 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.

Recommended Storage Temperature : Store below 30°C

7.3 Specific end uses
No data available

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters

8.2 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
Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance

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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
**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 work place.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the 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).

**Environment exposure controls**
Do not empty into drains

### Physical and chemical properties

#### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light yellow to yellow-green crystals or solid or powder or flakes or chunks</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>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/Water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### Other safety information
No data available

### Stability and Reactivity

#### Reactivity
No data available

#### Chemical stability
No data available

#### Possibility of hazardous reactions
No data available

#### Conditions to avoid
No data available

#### Incompatible materials
Strong oxidizing agents

#### Hazardous decomposition products
Other decomposition products - No data available

### Toxicological Information

#### Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Germ cell mutagenicity
No data available

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

Specific target organ toxicity- single exposure
No data available

Aspiration hazard
No data available

Potential Health Effects
Inhalation.
Refer Section 2
Skin
Refer Section 2
Eyes
Refer Section 2
Ingestion
Refer Section 2

Additional Information
RTECS : CZ1050000

12 Ecological Information
12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
No data available

12.6 Other adverse effects
No data available

13 Disposal Considerations
13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose of this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information
14.1 UN-No.
ADR/RID: 1578    IMDG: 1578    IATA: 1578

14.2 UN proper shipping name
ADR/RID : 1-Chloro-4-nitrobenzene
IMDG : 1-Chloro-4-nitrobenzene
IATA : 1-Chloro-4-nitrobenzene

14.3 Transport hazard class(es)
ADR/RID: 6.1    IMDG: 6.1    IATA: 6.1

14.4 Packaging group
ADR/RID: 2    IMDG: 2    IATA: 2
14.5 Environmental hazards
ADR/RID: No    IMDG: Marine Pollutant:Yes    IATA: No

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety datasheet complies with the requirements of Regulation(EC) No.1907/2006

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

16 Other Information
Further information
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