Alpha Chemika
ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION
MATERIAL SAFETY DATA SHEET
MSDS
Savgan Heights ; 102 ,B Wing ; R.T.O. Lane ,Andheri (West) Mumbai - 400053 , INDIA

Section 1 - Chemical Product and Company Identification

Product Name : 1-CHLORO-4-NITROBENZENE

Synonyms: p-Chloronitrobenzene, PNCB, p-Nitro Chlorobenene
CAS No.: 100-00-5
Molecular Weight: 157,55
Chemical Formula: $C_6H_4ClNO_2$

Section 2 - Composition, Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
1-chloro-4-nitrobenzene	100-00-5	98- 100%	Yes

Section 3 - Hazardous Identification

Risk advice to man and the environment
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. Possible risk of irreversible effects. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 4 - 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
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.

Section 5 - Fire Fighting Measures

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Section 6 - Accidental Release Measures

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.
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 for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

Section 7 - Handling and Storage

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Storage
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Section 8 - Exposure Controls, Personal Protection

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) 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).
Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
Eye protection
Face shield and safety glasses
Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place
Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Section 9 - Physical and Chemical Properties

Appearance Form
crystalline Colour
light yellow **Safety**
data
pH no data available
Melting point 80 - 83 °C
80 - 83 °C
Boiling point 242 °C
Flash point 124 °C - closed cup
Ignition temperature 510 °C
Lower explosion limit no data available
Upper explosion limit no data available
Density 1,298 g/mL at 25 °C
Water solubility insoluble
Partition coefficient:
n-octanol/water
log Pow: 2,6

Section 10 - Stability and Reactivity

Storage stability
Stable under recommended storage conditions.
Materials to avoid
Strong oxidizing agents, Strong bases
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

Section 11 - Toxicological Information

Acute toxicity
LD50 Oral - rat - 420 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Liver:Fatty liver degeneration. Blood:Methemoglobinemia-Carboxyhemoglobin.
LD50 Dermal - rabbit - 3.040 mg/kg
Irritation and corrosion
Skin - rabbit - Mild skin irritation
Eyes - rabbit - No eye irritation
Sensitisation
no data available
Chronic exposure
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (1-Chloro-4-nitrobenzene)
Laboratory experiments have shown mutagenic effects.
Signs and Symptoms of Exposure
May cause cyanosis.
Potential Health Effects
Inhalation Toxic if inhaled. May cause respiratory tract irritation.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Toxic if swallowed

Section 12 - Ecological Information

Elimination information (persistence and degradability)
Biodegradability
Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 36 d
Bioconcentration factor (BCF): 108
Ecotoxicity effects
Toxicity to daphnia
and other aquatic
invertebrates.
EC50 - Daphnia magna (Water flea) - 2,7 mg/l - 48 h
Toxicity to algae Growth inhibition EC50 - Chlorella pyrenoidosa - 4,9 mg/l - 96 h
Further information on ecology
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
no data available

Section 13 - Disposal Considerations

Product
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

Section 14 - Transport Information

ADR/RID
UN-Number: 1578 Class: 6.1 Packing group: II
Proper shipping name: CHLORONITROBENZENES, SOLID
IMDG
UN-Number: 1578 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: CHLORONITROBENZENES, SOLID
Marine pollutant: No
IATA
UN-Number: 1578 Class: 6.1 Packing group: II
Proper shipping name: Chloronitrobenzenes, solid

Section 15 - Regulatory Information

Labelling according to EC Directives
Hazard symbols
Xn Harmful
N Dangerous for the environment
R-phrase(s)
R22 Harmful if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)
S22 Do not breathe dust.
S24/25 Avoid contact with skin and eyes.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Section 16 - Additional Information

Not Available