



SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Catalogue No. : B 71579
Product Name : **BENZENE**

Manufacturer / supplier identification

Company : NICE Chemicals (P) Ltd. , Cochin , India
Tel - 0484 2800212 , 2802755

Contact For Information : Tel . No. – 0484 2802536 Fax : 0484 2802483
Emergency Telephone No. : 0484 2801583 Telefax No. : 0484 2802483

2. COMPOSITION / INFORMATION ON INGREDIENTS

Synonyms : Cyclohexatriene
CAS-No : 71-43-2
Ec-Index No. : 601-020-00-8
Molar Mass : 78.12
EC-No. : 200-753-7
Molecular Formula : C₆H₆

3. HAZARDS IDENTIFICATION

May cause cancer. Highly flammable. Also toxic danger of serious damage to health by prolonged exposure through inhalation in contact with skin and if swallowed.

Restricted to professional users. Attention: Avoid exposure obtain special instructions before use.



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4. FIRST AID MEASURES

After inhalation: Fresh air. If necessary apply mouth-to-mouth respiration or mechanical ventilation.

After skin contact : Wash off with plenty of water.
Remove contaminated clothing.

After eye contact : Rinse out with plenty of water with eyelids held open.
Summon eye specialist.

After swallowing : Avoid vomiting. Risk of aspiration. Laxative: Paraffin oil
Summon doctor. Keep airways free.

5. FIRE – FIGHTING MEASURES

Suitable extinguishing media: powder foam,

Fire extinguisher : powder, CO₂.

Special risks: Combustible. Vapours heavier than air .Keep away from sources of ignition. Take measures to prevent electrostatic charging. Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment for fire fighting

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Other Information: Prevent fire-fighting water from entering surface water or ground water



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6. ACCIDENTAL RELEASE MEASURES

Do not inhale vapours/aerosols. Avoid substance contact.

Environmental protection measures : Do not allow entering sewage system. Risk of explosion.

Procedures for cleaning / absorption : Take up with liquid absorbent material (Eg chemizorb). Forward for disposal. Clean up affected area.

7. HANDLING AND STORAGE

Handling: Take measures to prevent

Electrostatic charging.

Storage: Tightly closed in a well ventilated

Place, away from sources of ignition and heat.

At +15⁰C to +25⁰C. Accessible only for authorised persons.

8. EXPOSURE CONTROLS /PERSONAL PROTECTION

Personal protective equipment :

Respiratory protection : Required when vapours/aerosols are generated.

Filter A (acc. to DIN 3181) for vapours of organic compounds.

Eye protection: required

Hand protection: required

Protective clothing should be selected for the working place depending on concentration and quantity of the hazardous substance handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.



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Industrial hygiene: Change contaminated clothing. Application of skin protective barrier cream recommended. Wash hands after working with substance. Under no circumstances eat or drink at work place.

Other protective equipment: Fire resistant protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Colour	:	Colourless
Odour	:	Characteristic
Melting temperature	:	5.5 ⁰ C
Boiling temperature	:	80.1 ⁰ C
PHvalue	:	Not available
Ignition temperature	:	555 ⁰ C
Flash point	:	-11 ⁰ C
Explosion limits lower	:	1.4 Vol%
Upper	:	8 Vol%
Relative vapour density	:	Not available
Density (20 ⁰ C)	:	0.88 g/cm ³
Solubility in water (20 ⁰ C)	:	1.770 g/l
Bioconcentration factor	:	1-10



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10. STABILITY AND REACTIVITY

Conditions to be avoided: Heating.

Substance to be avoided: Mineral acids, sulphur, halogens, halogen-halogen compounds, oxidising agent (HNO₃, O₃, peroxy compounds, oxyhalogenic compounds, CrO₃)
halogenated hydrocarbons (in the presence of light metals)

Hazardous decomposition products : Not known yet.

Further information : Steam volatile, highly flammable.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity : LD₅₀(oral, rat):930 mg/kg

LD₅₀(inhalation, rat):44 mg/l/4h; LDLo (oral, human) : 50mg/Kg

The literature data available to us do not confirm with the labelling prescribed by the E C .
The EC has dossiers which have not been published.

Subacute to chronic toxicity : Experience has shown this substance to be carcinogenic in man. Mutagenic effect in animal effect has been demonstrated in animal studies on mammals, justifying the assumption that exposure of humans to the substance produces hereditary damage.

No Teratogenic effecting animal experiments. The data available on the impairment of reproductive performance are inadequate for any assessment.

Further toxicological information: After inhalation of vapour : toxic, absorption.

After skin contact: irritations, skin absorption.



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After eye contact: mucosal irritations

After swallowing: nausea and vomiting. Risk of aspiration upon vomiting.

After absorption: Headache, dizziness, cardiac dysrhythmia, drop in blood pressure, agitation, spasms, respiratory paralysis, death.

12. ECOLOGICAL INFORMATION

Biological degradation : Readily bio degradable(reduction: DOC>70%;BOD>60%;BOD₅to COD>50%)Behaviour in environmental compartments : Distribution preferentially in air.

Distribution: log P(oct)2.13; Evaluation number (FRG) (fish:4.2-4.5;Evaluation number (FRG) (mammal):1.0;

Ecotoxic effects: Biological effects : Toxic to aquatic organisms

Endangers drinking water supplies if allowed to enter soil or water. Risk of formation of toxic and explosive mixtures with air above water surface. Fish toxicity: Onchorhynchus mykiss LC₅₀ :

5.3mg/l/96h: C auratus LC₅₀ :34mg/l/96h; Daphnia toxicity: Daphnia magna EC₅₀ : 200mg/l/48h

Degradability : BOD 71% of ThOD /5d; COD:19% of Thod; ThOD :3.10g/g

Do not allow to enter waters, waste water, or soil

13. DISPOSAL METHOD

There are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws & regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste .



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Disposal in compliance with official regulations. Handle contaminated packaging as in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. TRANSPORT INFORMATION

Transport over land

ADR/RID and GGVS/GGVE : GGVS/GGVE class: 3 Number and letter: 3b
ADR/RID class : 3 Number and letter: 3b
Name of material : 1114 BENZENE

River transport AND/ADNR: Not examined

Sea transport IMDG : IMDG class: 3.2 UN –No.: 1114 Packaging group: II
Ems : 3-03 MFAG: 312
Correct technical name: BENZENE

Air transport

ICAO-TI and IATA-DGR: ICAO/IATA class: 3 UN/ID-No.: 1114 Packaging group: II
Correct technical name: BENZENE

15. REGULATORY INFORMATION

Labelling according to EC Directives

Symbol : F Highly inflammable
 T Toxic
R- Phrases : 45-11-48/23/24/25



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May cause cancer. Highly flammable. Also toxic: Danger of serious damage to health by prolonged exposure through inhalation and in contact with skin.

S-phrases : 53-45

Avoid exposure- obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately.

Water pollution class : 3 (highly polluting substance)

16. OTHER INFORMATION

Reason for alteration

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.
