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MATERIAL SAFETY DATA SHEET

6-TERT-BUTYL-2,4 DIMETHYL PHENOL

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION :

Chemical Name : 6-Tert-Butyl-2,4 DIMETHYL PHENOL

Company Identification :

Ratnagiri Chemicals Pvt. Ltd.

Head Office: 611/612 Raheja Arcade, Sector 11,
CBD Belapur, Navi Mumbai – 400614.
Maharashtra, INDIA

Tel Nos +91-22-2757 0191

+91-22-2757 0236

Fax Nos +91-22-2757 0060

Factory: C-39, MIDC Lote-Parshuram Indl Area
Lote - 415722

Maharashtra, INDIA

Tel Nos +91-2356-272650

Fax Nos +91-2256-272117

Chemical name : 6-Tert-Butyl-2,4 DIMETHYL PHENOL
Product use : End-Product, Chemical Intermediate
CAS number : 1879-09-0
EINECS/ELINCS no : 217-533-1
Synonmy(s) : 6-tertiary Butyl-2,4-Xylenol [6-TBX]
NAERG# : 154
WHMIS Classifications : E,D1B,D2B

Section 2 – COMPOSITION, INFORMATION ON INGREDIENTS :

Chemical characterization: 6-Tert-Butyl-2,4 DIMETHYL PHENOL : > 98% wt.



Section 3. HAZARD IDENTIFICATION:

Emergency Overview Hazard Statements

ANSI signal word for this material is: DANGER

Per SARA 312 regulations this material represents the following health hazards[s]: acute chronic

Per SARA 312 regulations this material is classified as a pure material.

General Fire Hazards

High concentration of airborne dust may form explosive mixture with air. Ensure that good housekeeping practices are followed as well as applicable guidelines such as the National Fire Protection Association [NFPA] 654, "Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids". Vapors may be heavier than air and may travel along the ground to some distant source of ignition and flash back.

Appearance

Straw-yellow, slightly viscous liquid, or a solid at <70°F, with a typical phenol odor.

Emergency overview

Each person who could potentially be exposed to this material, via any route of entry, while performing their assignments, routine and non-routine; from piping; and/or during an emergency situation, should review this MSDS in order to better understand the hazards associated with the material. Accordingly, please note an * in a HMIS® field indicates this material may potentially involve certain chronic health issues such as cancer -- HMIS® is a registered trade and service mark of the NPCA. To work safely with this material: keep away from heat and ignition sources do not get in eyes, on skin or clothing do not breath in material's vapors, dust, or fumes keep container closed use with adequate ventilation -- do not enter any confined spaces without first verifying air quality wash thoroughly after handling

Health Dangers

skin burns toxic if absorbed through skin

Health Warnings
Lung irritant

Health Cautious

May cause nervous system effects may effect mucous membranes , may cause eye irritations , may cause gastrointestinal disturbances.

Environment Concerns

2,4 DIMETHYL-6-tertiary –BUTYLPHENOL: Aquatic Toxicity: an acute fish toxicity is reported @ >1.0 mg/L; may bioconcentrate.



Section 4. FIRST AID INFORMATION:

Contact with skin:

Immediately take off all contaminated clothing.

Areas of the body that have or are only even suspected of having come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Contact with eyes:

Wash immediately and thoroughly with running water, keeping eyelids raised, for at least 10 minutes. Following this, protect the eyes with sterile gauze or a clean, dry, handkerchief. OBTAIN A MEDICAL EXAMINATION.

Swallowing:

Induce vomiting giving 500 ml of tepid water. SEEK A MEDICAL EXAMINATION IMMEDIATELY and present the safety-data sheet.

Inhalation:

Ventilate the premises. The patient has to be removed immediately from the contaminated premises and made to rest in a well ventilated area. Should the patient feel unwell, OBTAIN MEDICAL ATTENTION.

Section 5. FIRE FIGHTING MEASURES:

Recommended extinguishers:

Water spray, CO₂, Foam, Chemical powders, according to the materials involved in the fire. Cool the containers exposed to the fire with water spray.

Extinguishers not to be used:

Water jet.

Risks arising from combustion:

Avoid inhaling the fumes.

Protective equipment:

Wear helmet with visor, anti-fire paint jacket and trousers. Use self-containing breathing apparatus to protect the respiratory system.

Section 6. ACCIDENTAL RELEASE MEASURES:

Measures for personal safety:

Use a mask, gloves and protective clothing.

Environmental measures:

Avoid formation of dusts.

If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

Cleaning methods:

Rapidly recover the product. To do so, wear a mask and protective clothing.

Prevent the product from entering the drainage system.

Recover the product for re-use if possible, or for elimination.

After the product has been recovered, rinse the area and materials involved with water avoiding to produce some more pollution.

Store in closed and marked containers_.



Section 7. HANDLING AND STORAGE:

Handling precaution
Use Personal Protective Equipments.

Storage conditions:
Always keep the containers tightly closed.
Always keep in a well ventilated place.
The substance is stable in the normal atmospheric conditions and has duration 1 year/s at least from the production date, if correctly conserved and packed.

Instructions as regards storage premises:
Adequately ventilated premises and complete of eyewash fountain and emergency shower. Dispose on suitable floors and provided of spillage basins.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Precautionary measures:
Give adequate ventilation to the premises where the product is stored and/or handled.

Respiratory protection:
Not needed in adequately ventilated premises or when the exposure is not prolonged. Use an organic respirator for dust with interchanging P2 filters. Not to use in devoid oxygen atmospheres or contaminates from gas and injurious or toxic vapors.

Protection for hands:
Use protective gloves, resistant to chemical agents.(EN 374). Protective gloves must be chosen to second of the workplace. The specific suitable for the workplace would have to be cleared with the manufacturer of protective gloves. The information are based on own controls, bibliographical information and information of producers of gloves, or are derived from analogies with similar substances. Lend attention to the last of a protecting glove from substances chemistries.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES:

Formula	C ₁₂ H ₁₈ O
Molecular Weight	178.27
Appearance and colour	Clear colorless Liquid
Melting Point	22.2 ^o C
Boiling Point	248.9 ^o C
Flash Point	97.8 ^o C
Auto ignition temperature	425 ^o C
Vapour Pressure	0.04 mm Hg at 38 ^o C
Relative Density	0.4 ÷ 0.5
Solubility in water	Not Very soluble (< 1%)



Section 10. STABILITY:

Conditions to avoid:
Stable under normal conditions.

Polymerization :

None Under normal processing

Hazardous decomposition products:

In case thermal decomposition, it may form toxic fumes of Phenol and of Carbon oxides. It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth), nitrides and powerful reducing agents.

Section 11. TOXICOLOGICAL INFORMATION:

Routes of Entry

inhalation ingestion eye contact skin contact absorption

Target Organs

respiratory system central nervous system skin

Absorption

respiratory system effects - pulmonary edema; central nervous system effects - convulsions, seizure threshold

Skin Contact

irritation - moderate to severe

Dermal LDSOs

6-tertiary-BUTYL - 2,4- XYLENOL 1879-09-0 Dermal LD50[rabbit]: <50 mg/kg [vendor]

Eye Contact

irritation - moderate to severe

Ingestion

gastrointestinal tract effects -- small intestine [ulcers, bleeding]; respiratory system effects -- pulmonary edema; central nervous system effects -- seizure threshold, convulsions

Oral LD50

6-tertiary-BUTYL - 2, 4- XYLENOL 1879-09-0 Oral LD50[mouse]: 530 mg/kg

Oral LDLo

6-tertiary-BUTYL - 2, 4- XYLENOL 1879-09-0 Oral LDLo[rat]: 1400 mg/kg

Inhalation
respiratory system effects



Section 12. ECOLOGICAL INFORMATION:

Adopt good working practices, so that the product is not released into the environment.

Aquatic Toxicity : An acute fish toxicity test is reported at .1.0 mg/l.
May bio accumulate

Section 13. DISPOSAL INFORMATION:

Send to authorized disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Clean completely empty packaging and dispose excluding possible unauthorized re-use.

The contaminated empty packing from the product is considered a refusal of the same class of the content and must be dispose in agreement with the relative European norms.

Section 14. TRANSPORTATION INFORMATION:

Comments:

NOTE: This section's data are provided as a guide to the overall classification of the product. However, transportation classifications may be subject to change as, for example, with changes in package size. Consult shipper requirements under IMO, ICAO (IATA), TDG and 49 CFR to assure regulatory compliance. Additionally, please contact the Transportation & Regulatory Affairs Specialist with 51 Group @ (518)-370-4200 if there are questions regarding the cleaning of containers, or vessels. Remember that the reuse, treatment, or disposal, of any related residuals or wastes must be in accordance with all federal, state, and local environmental regulations.

SURFACE TRANSPORTATION (HIGHWAY/RAIL)

BULK- TANK TRUCK/TANK CAR

Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
Hazard Class	6.1
Identification Number	UN2811
Packing Group	PG I
Marine Pollutant	Marine Pollutant (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)



**SURFACE TRANSPORTATION (HIGHWAY/RAIL)
DRUM(S)/BAG(S)**

Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
Hazard Class	6.1
Identification Number	UN2811
Packing Group	PG I

INTERMEDIATE BULK CONTAINER

Shipping Name	Material not authorized to ship in IBC's
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PAIL(S)/CAN(S) Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
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Hazard Class	6.1
Identification Number	UN2811
Packing Group	PG I

IMDG CODE (WATER)

BULK- TANK TRUCK/TANK CAR

Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
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Hazard Class	6.1
Identification Number	UN2811
Packing Group	PG I
Marine Pollutant	Marine Pollutant (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)



DRUM(s)/BAG(s)

Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
Hazard Class	class6.1
Identification Number	UN2811
Packing Group	PG I
Marine Pollutant	Marine Pollutant (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)

INTERMEDIATE BULK CONTAINER

Shipping Name	Material not authorized to ship in IBC's
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PAIL(s)/CAN(s) Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
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Hazard Class	class 6.1
Identification Number	UN2811
Packing Group	PG I
Marine Pollutant	Marine Pollutant (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)

ICAO/IATA [AIR]

PAIL(s)/CAN(s) Shipping Name	Toxic solids, organic, n.o.s., molten (2-(1,1-dimethyl-phenol)-4-6- dimethyl-phenol)
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Hazard Class	6.1
Identification Number	UN2811
Packing Group	I



Section 15. REGULATORY INFORMATION:

WHIMS RATING:
E,D1B ,D2B

European Classification :

This Substance is considered hazardous per MSDS Directive (91/155/EC) as amended.

R Phrases:
R27 Toxic in contact with skin.
R36 irritating to eyes.
R53 Toxic to aquatic organisms.

S Phrases:
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 Wear suitable gloves and eye/face protection.
S61 Avoid release in environment.

Section 16. OTHER INFORMATION

For additional information concerning this product, contact the following:

PRODUCT EMERGENCIES

RATNAGIRI CHEMICALS PVT LTD
Head Office: 611/612 Raheja Arcade, Sector 11,
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Factory: C-39, MIDC Lote-Parshuram Indl Area
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The data and recommendations presented in this data sheet concerning the use of our product and the materials contain there in are believed to be accurate and are based on information which is considered reliable as of the date hereof. However, the customer should determine the suitability of such material for his purpose before adopting them on a commercial scale. Since the use our products by others is beyond our control, no guarantee, express or implied, is made and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be constructed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.
