OXFORD LAB FINE CHEM LLP

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Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

tert-BUTANOL 99% AR

MSDS CAS: 75-65-0

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: tert-BUTANOL 99% AR
CAS No: 75-65-0
C.I. No.: Not available.
Synonym: t-Butyl alcohol, Trimethyl carbinol, tert-Butyl alcohol
Chemical Name: tert-BUTANOL
Chemical Formula: $(CH_3)_3COH$

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: OXFORD LAB FINE CHEM LLP
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS No	% by Weight
tert-BUTANOL	75-65-0	≤100%

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of inhalation (lung irritant). Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion,.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, cardiovascular system, central nervous system (CNS), eye, lens or cornea. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may
be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious orcorrosive. Seek medical attention.

Section 4: First Aid Measures (Continued)

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconsciousperson. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 437°C (818.6°F)

Flash Points: CLOSED CUP: 19°C (66.2°F).

Flammable Limits: LOWER: 1.2% UPPER: 9%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards in Presence of Various Substances:Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in

presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Decomposition of tertPenty Alcohol by Hydrogen Sulfide is explosively violent.

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Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill: Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth,sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confinedareas; dike if needed.

Section 7: Handling and Storage

Precautions: Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do notbreathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratoryequipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin andeyes.

Storage: Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed andsealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respectivethreshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoidinhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling thisproduct.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state	**: Liquid**
Colour	**: Colourless.**
Appearance	**: Clear liquid.**
Molecular mass	**: 74.12 g/mol**
Odour	**: camphor odour.**
Odour threshold	**: Not available**
Melting point	**: Not applicable**
Freezing point	**: 23 – 26 °C**
Boiling point	**: 82 – 83 °C**
Flammability	**: Flammable Highly flammable liquid and vapour.**
Lower explosion limit	**: 2.4 vol %**
Upper explosion limit	**: 8 vol %**
Flash point	**: 11 °C**
Auto-ignition temperature	**: 480 °C**
Decomposition temperature	**: Not available**
pH	**: 7 at 20 °C**
Viscosity, kinematic	**: 4.295 mm^2/s**
Viscosity, dynamic	**: 3.35 mPa·s at 30 °C**
Solubility	**: Water: 1000 g/l at 25 °C - Completely miscible**
Partition coefficient n-octanol/water (Log Kow)	**: Not available**
Vapour pressure	**: 41 hPa at 20 °C**
Vapour pressure at 50°C	**: Not available**
Density	**: 0.78 g/cm^3 at 20 °C**
Relative density	**: Not available**
Relative vapour density at 20°C	**: 2.55 (Air = 1)**
Particle characteristics	**: Not applicable**

Section 10: Stability and Reactivity Data

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Not available.
Incompatibility with various substances: Not available.
Corrosivity: Not available.
Special Remarks on Reactivity: Not available.
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1000 mg/kg [Rat].

Chronic Effects on Humans:Causes damage to the following organs: lungs, cardiovascular system, central nervous system (CNS), eye, lens or cornea.

Other Toxic Effects on Humans: Very hazardous in case of inhalation (lung irritant). Hazardous in case of skin contact (irritant), of ingestion, .

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

Land transport (ADR-RID)

Proper shipping nam : BUTANOLS
H.I. No. : 33
UN N° : 1120
ADR – Class : 3
ADR – Group : II

Sea transport (IMDG) [English only]

Proper shipping name : BUTANOLS
UN N° : 1120
ADR – Class : 3
IMO-IMDG - Packing group : II

Air transport (ICAO-IATA) [English only]

Proper shipping name : BUTANOLS
UN N° : 1120
IATA - Class or division : 3
IATA - Packing group : II

Section 15: Other Regulatory Information

EU-Regulations:

No REACH Annex XVII restrictionstert-BUTANOL For Synthesis is not on the REACH Candidate List
tert-BUTANOL For Synthesis is not on the REACH Annex XIV List

Germany:
AwSV/VwVwS Annex reference:Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 219)

12th Ordinance Implementing the Federal:
Immission Control Act - 12.BImSchV:Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Section 15: Other Regulatory Information (Continued)

Denmark:
Class for fire hazard:Class I-1Store unit:1 literClassification remarks:F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followedRecommendations Danish Regulation:Young people below the age of 18 years are not allowed to use the product

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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