

MSDS# 22630

Section 1 - Chemical Product and Company Identification

MSDS Name: tert-Butanol

Catalog Numbers: AC107710000, AC107710010, AC107710025, AC107710200, AC390690000, AC390690010
AC390690010, A401-1, A401-500, NC9757992, NC9766578, NC9767417, NC9767429
Synonyms: tert-Butyl alcohol; 2-Methyl-2-propanol.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 75-65-0
Chemical Name: tert-Butyl alcohol
%: 99+
EINECS#: 200-889-7

Hazard Symbols:

XN F



Risk Phrases:

11 20 36

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Flammable liquid and vapor. May cause respiratory tract irritation. Harmful if inhaled. Lachrymator (substance which increases the flow of tears). May cause central nervous system effects. Causes eye and skin irritation. May cause dermatitis. Target Organs: Kidneys, central nervous system, liver, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Lachrymator (substance which increases the flow of tears).
Skin: Causes skin irritation. May cause dermatitis. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation. May cause central nervous system effects.
Chronic: May cause liver and kidney damage. Adverse reproductive effects have been reported in animals. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid.
Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance;

Inhalation: induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. Water may be ineffective. Use water fog, dry chemical, carbon dioxide, or regular foam.

Autoignition Temperature: 470 deg C (878.00 deg F)

Flash Point: 11 deg C (51.80 deg F)

Explosion Limits: Lower: 2.40 vol %

Explosion Limits: Upper: 8.00 vol %

NFPA Rating: health: 2; flammability: 3; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
tert-Butyl alcohol	100 ppm	100 ppm TWA; 300 mg/m3 TWA 1600 ppm IDLH	100 ppm TWA; 300 mg/m3 TWA

OSHA Vacated PELs: tert-Butyl alcohol: 100 ppm TWA; 300 mg/m3 TWA

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Physical State:

Color: after melting, clear colorless

Odor: camphor

pH: 7

Vapor Pressure: 36 mbar @ 20 deg C

Vapor Density: 2.6 (air=1)

Evaporation Rate: 1.05 (Butyl Acetate=1)

Viscosity: 3.35 mPa @ 30 deg C

Boiling Point: 83 deg C @ 760 mmHg (181.40°F)

Freezing/Melting Point: 25 - 25.5 deg C

Decomposition Temperature: Not available

Solubility in water: Soluble

Specific Gravity/Density: 0.780

Molecular Formula: C4H10O

Molecular Weight: 74.12

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials	Strong oxidizing agents, acids, acid chlorides, acid anhydrides.
Hazardous Decomposition Products	Carbon monoxide, carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 75-65-0: EO1925000

RTECS:

CAS# 75-65-0: Dermal, guinea pig: LD50 = >10 mL/kg;

Draize test, rabbit, eye: 100 uL/24H Severe;

Draize test, rabbit, skin: 500 uL/24H Mild;

Inhalation, rat: LC50 = >10000 ppm/4H;

LD50/LC50: Oral, rabbit: LD50 = 3559 mg/kg;

Oral, rabbit: LD50 = 3600 mg/kg;

Oral, rat: LD50 = 2743 mg/kg;

Oral, rat: LD50 = 3500 mg/kg;

Skin, rabbit: LD50 = >2 gm/kg;

Carcinogenicity: tert-Butyl alcohol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: BUTANOLS

Hazard Class: 3

UN Number: UN1120

Packing Group: II

Canada TDG

Shipping Name: BUTANOLS

Hazard Class: 3

UN Number: UN1120

Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 11 Highly flammable.

R 20 Harmful by inhalation.

R 36 Irritating to eyes.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 75-65-0: Not available

Canada

CAS# 75-65-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 75-65-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 75-65-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #13 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
