

Material Safety Data Sheet

Butylated hydroxytoluene MSDS

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Butylated hydroxytoluene	128-37-0	100

Toxicological Data on Ingredients: Butylated hydroxytoluene: ORAL (LD50): Acute: 890 mg/kg [Rat]. 650 mg/kg [Mouse]. 10700 mg/kg [Guinea pig].

Section 3: Hazards Identification

Potential Acute Health Effects:

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

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, liver, central nervous system (CNS).
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 15 minutes. 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.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. 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: May be combustible at high temperature.

Auto-Ignition Temperature: 470°C (878°F)

Flash Points: CLOSED CUP: 118.3°C (244.9°F). OPEN CUP: 126.67°C (260°F).

Flammable Limits: Not available.

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

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence 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:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

When heated to decomposition it emits toxic fumes. As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

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 not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 10 (mg/m³) from OSHA (PEL) [United States] Inhalation

TWA: 10 (mg/m³) from ACGIH (TLV) [United States] Inhalation

TWA: 10 (mg/m³) from NIOSH [United States] Inhalation

TWA: 10 (mg/m³) [United Kingdom (UK)] Inhalation Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: phenolic (Slight.)

Taste: Tasteless.

Molecular Weight: 220.36 g/mole

Color: White to yellowish.

pH (1% soln/water): Not applicable.

Boiling Point: 265°C (509°F)

Melting Point: 70°C (158°F)

Critical Temperature: Not available.

Specific Gravity: 1.048 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 7.6 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, acetone.

Solubility:

Soluble in methanol, acetone.

Insoluble in cold water.

Freely soluble in Toluene.

Soluble in Isopropanol, Methyl Ethyl Ketone, Cellosolve, Benzene, most hydrocarbon solvents, Ethanol, Petroleum Ether, Liquid Petrolatum, Linseed Oil.

Insoluble in alkali

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

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. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 650 mg/kg [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
May cause damage to the following organs: blood, liver, central nervous system (CNS).

Other Toxic Effects on Humans:

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

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic).
May cause cancer based on animal test data. No human data found.
May cause adverse reproductive effects and birth defects (teratogenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes mild to moderate skin irritation.

Eyes: Causes moderate eye irritation.

Inhalation: May cause respiratory tract (nose, throat) irritation.

Ingestion: May be harmful if swallowed. The clinical manifestations of acute are not well known. May cause gastritis, vomiting, hypermotility, diarrhea. May affect behavior/central nervous system(dizziness, weakness, somnolence, slurred speech, ataxia, visual and auditory hallucinations, headache, confusion, temporary loss of consciousness), respiration (respiratory depression), blood (reduced ability to clot)

Chronic Potential Health Effects:

Ingestion: Prolonged or repeated ingestion may affect the liver, kidneys, thyroid, adrenal gland, behavior/central nervous system and learning ability, blood(reduced ability to clot), and may cause weight loss.

Ingestion or skin contact may also cause allergic reaction (dermatitis, asthma).

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:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

Illinois toxic substances disclosure to employee act: Butylated hydroxytoluene
Rhode Island RTK hazardous substances: Butylated hydroxytoluene
Pennsylvania RTK: Butylated hydroxytoluene
Minnesota: Butylated hydroxytoluene
Massachusetts RTK: Butylated hydroxytoluene
New Jersey: Butylated hydroxytoluene
California Director's List of Hazardous Substances: Butylated hydroxytoluene
TSCA 8(b) inventory: Butylated hydroxytoluene

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): It has not yet been classified by the Service du repertoire toxicologique.

DSCL (EEC):

R22- Harmful if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.
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.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.