



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: Butylated hydroxytoluene
This MSDS is valid for all grades and catalog #'s

Synonyms: 2,6-Di-tert-butyl-p-cresol; 2,6-Bi (1,1-dimethylethyl)-4-methylphenol; 2,6-Di-tert-butyl-1-hydroxy-4-methylbenzene; 2,6-Di-tert-butyl-p-methylphenol; 3,5-Di-tert-butyl-4-hydroxytoluene; 4-Methyl-2, 6-di-tert-butylphenol; Butylated hydroxytoluene; Butylhydroxytoluene

Formula: C₁₅-H₂₄-O

Manufacturer: PHARMCO-AAPER
58 Vale Road
Brookfield, Connecticut 06804, USA
Phone (203) 740-3471
Fax (203) 740-3481

1101 Isaac Shelby Drive
Shelbyville, KY 40065
Phone (502) 633-0650
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Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION /INFORMATION ON INGREDIENTS

% by weight	Material	CAS #	TLV/PEL	LC50/LD50
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100	Butylated hydroxytoluene	128-37-0	TWA: 10 CEIL:20 (mg/m3) from ACGIH (TLV) [United States] [1995] TWA 10 from NIOSH TWA 10 (mg/m3) [Australia]	ORAL (LD50): Acute: 890 mg/kg [Rat]. 650 mg/kg [Mouse]. 107000 mg/kg [Guinea pig].
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SECTION III

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 IV

FIRST AID

Obtain medical attention for all cases of over-exposure.

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.

Hazardous 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.

Hazardous 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.

Hazardous Ingestion: Not available.

SECTION V

FIRE FIGHTING MEASURES

Fire:

Flammability of the Product: May be combustible at high temperature.

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

Flash point: 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: Slightly flammable to flammable in presence of heat.

Explosion Hazards: 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 Extinguishing Media: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

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

SECTION VI

SPILL/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 VII

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 VIII

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

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance: Solid (Crystalline solid.)

Molecular Weight: 220.36 g/mole

Odor: phenolic (Slight.)

Taste: Tasteless.

Color: White to yellowish.

pH (1% Solution in 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 (mm Hg): Not applicable.

Vapor Density (Air=1): 7.6 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Water/Oil Dist. Coefficient: 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 X

STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibilities: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Information: Not available.

SECTION XI

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 Information on Toxicity to Animals: Not available.

Special Information on Chronic Effects/Toxicity 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) 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, hyper motility, 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 XII 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 Information on Products of Biodegradation: Not available.

SECTION XIII DISPOSAL CONSIDERATIONS

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities.

SECTION XIV TRANSPORTATION INFORMATION

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

UN: Not applicable.

Special Provisions for Transport: Not applicable.

SECTION XV REGULATORY INFORMATION

Federal and State Regulations: Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE**

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in

all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: **NONE**

Pennsylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **Butylated**

hydroxytoluene

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **Butylated**

hydroxytoluene

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

NONE

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: **No products were found.**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

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.

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

References: Not available.

Other Special Considerations: Not available.

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAAPER assumes not responsibility for the completeness or accuracy of the information contained herein.