

ALFAAA16863

## 2,6-Di-tert-butyl-4-methylphenol

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**产品说明:** 2,6-二叔丁基-4-甲基苯酚  
**Product Description:** 2,6-Di-tert-butyl-4-methylphenol

**Cat No. :** A16863  
**Synonyms** BHT; Butylated hydroxytoluene; DBPC; Ionol; 2,6-Di-tert-butyl-p-cresol  
**CAS No** 128-37-0  
**Molecular Formula** C15 H24 O

**Supplier** Alfa Aesar  
Avocado Research Chemicals, Ltd.  
Shore Road  
Port of Heysham Industrial Park  
Heysham, Lancashire LA3 2XY  
United Kingdom  
Office Tel: +44 (0) 1524 850506  
Office Fax: +44 (0) 1524 850608

**Emergency Telephone Number** Call Carechem 24 at  
+44 (0) 1865 407333 (English only);  
+44 (0) 1235 239670 (Multi-language)

**E-mail address** uktech@alfa.com  
www.alfa.com  
Product Safety Department

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Solid

**Appearance**  
White

**Odor**  
Slight phenolic

#### Emergency Overview

May be harmful if swallowed. Very toxic to aquatic life with long lasting effects.

#### Classification of the substance or mixture

Acute Oral Toxicity	Category 5
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

#### Label Elements



## 2,6-Di-tert-butyl-4-methylphenol

## Signal Word

## Warning

## Hazard Statements

H303 - May be harmful if swallowed

H410 - Very toxic to aquatic life with long lasting effects

## Precautionary Statements

## Prevention

P270 - Do not eat, drink or smoke when using this product

## Response

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

## Storage

P403 - Store in a well-ventilated place

## Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Physical and Chemical Hazards

None identified.

## Health Hazards

May be harmful if swallowed.

## Environmental hazards

Very toxic to aquatic life with long lasting effects. . Is not likely mobile in the environment due its low water solubility. Spillage unlikely to penetrate soil.

## Other Hazards

No information available

Toxic to terrestrial vertebrates. Contains a known or suspected endocrine disruptor. Contains a substance on the National Authorities Endocrine Disruptor Lists.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
2,6-Di-tert-butyl-p-cresol	128-37-0	>95

## SECTION 4. FIRST AID MEASURES

## General Advice

If symptoms persist, call a physician.

## Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

## Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

## Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

## Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

## Most important symptoms and effects

None reasonably foreseeable.

## Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## 2,6-Di-tert-butyl-4-methylphenol

**Notes to Physician**

Treat symptomatically.

**SECTION 5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.**Extinguishing media which must not be used for safety reasons**

No information available.

**Specific Hazards Arising from the Chemical**

Do not allow run-off from fire-fighting to enter drains or water courses. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

**Environmental Precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

**Methods for Containment and Clean Up**

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7. HANDLING AND STORAGE****Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Specific Use(s)**

Use in laboratories

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control Parameters**

Component	China	Taiwan	Hong Kong	The United Kingdom
2,6-Di-tert-butyl-p-cresol	-	-	-	STEL: 30 mg/m <sup>3</sup> 15 min TWA: 10 mg/m <sup>3</sup> 8 hr

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	European Union
2,6-Di-tert-butyl-p-cresol	TWA: 2 mg/m <sup>3</sup>	(Vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	

**Monitoring methods**

## 2,6-Di-tert-butyl-4-methylphenol

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Exposure Controls****Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers	-	EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				
PVC				

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Particulates filter conforming to EN 143

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Particle filtering: EN149:2001  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** White  
**Physical State** Solid

**Odor** Slight phenolic  
**Odor Threshold** No data available  
**pH** Not applicable  
**Melting Point/Range** 69 - 71 °C / 156.2 - 159.8 °F  
**Softening Point** No data available

## 2,6-Di-tert-butyl-4-methylphenol

<b>Boiling Point/Range</b>	265 °C / 509 °F	@ 760 mmHg
<b>Flash Point</b>	127 °C / 260.6 °F	<b>Method</b> - No information available
<b>Evaporation Rate</b>	Not applicable	Solid
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	0.02 mbar @ 20 °C	
<b>Vapor Density</b>	Not applicable	Solid
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Water Solubility</b>	Insoluble	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
2,6-Di-tert-butyl-p-cresol	5.1	
<b>Autoignition Temperature</b>	345 °C / 653 °F	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	Not applicable	Solid
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	
<b>Molecular Formula</b>	C15 H24 O	
<b>Molecular Weight</b>	220.35	

## SECTION 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Hazardous Reactions</b>	None under normal processing.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Avoid dust formation.
<b>Materials to avoid</b>	Strong oxidizing agents. Strong acids. Bases. Acid chlorides. Acid anhydrides. copper. Copper alloys. Peroxides.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11. TOXICOLOGICAL INFORMATION

## Product Information

## (a) acute toxicity;

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
2,6-Di-tert-butyl-p-cresol	> 6 g/kg ( Rat )	> 2 g/kg ( Rat )	

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

## (d) respiratory or skin sensitization;

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

## (e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

Mutagenic effects have occurred in humans; Not mutagenic in AMES Test

## 2,6-Di-tert-butyl-4-methylphenol

(f) carcinogenicity; Based on available data, the classification criteria are not met  
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

(j) aspiration hazard; Not applicable  
Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed No information available

## SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
2,6-Di-tert-butyl-p-cresol	LC50 = 0.199 mg/L 96h	EC50 > 0.31 mg/L 48h	EC50 = 0.758 mg/L 96h EC50 = 6 mg/L 72 h	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min EC50 = 8.98 mg/L 30 min

Persistence and Degradability Not readily biodegradable  
Persistence May persist.  
Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative Potential Product has a high potential to bioconcentrate

Component	log Pow	Bioconcentration factor (BCF)
2,6-Di-tert-butyl-p-cresol	5.1	230 - 2500 dimensionless

Mobility in soil Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility Is not likely mobile in the environment due its low water solubility and propensity to bind to soil particles

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors  
Persistent Organic Pollutant This product does not contain any known or suspected substance  
Ozone Depletion Potential This product does not contain any known or suspected substance

## SECTION 13. DISPOSAL CONSIDERATIONS

**SAFETY DATA SHEET****2,6-Di-tert-butyl-4-methylphenol**

<b>Waste from Residues/Unused Products</b>	Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point.
<b>Other Information</b>	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

**SECTION 14. TRANSPORT INFORMATION****Road and Rail Transport**

<b>UN-No</b>	UN3077
<b>Proper Shipping Name</b>	Environmentally hazardous substances, solid, n.o.s.
<b>Technical Shipping Name</b>	2,6-Di-tert-butyl-p-cresol
<b>Hazard Class</b>	9
<b>Packing Group</b>	III

**IMDG/IMO**

<b>UN-No</b>	UN3077
<b>Proper Shipping Name</b>	Environmentally hazardous substances, solid, n.o.s.
<b>Technical Shipping Name</b>	2,6-Di-tert-butyl-p-cresol
<b>Hazard Class</b>	9
<b>Packing Group</b>	III

**IATA**

<b>UN-No</b>	UN3077
<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.*
<b>Technical Shipping Name</b>	2,6-Di-tert-butyl-p-cresol
<b>Hazard Class</b>	9
<b>Packing Group</b>	III

**Special Precautions for User** No special precautions required

**SECTION 15. REGULATORY INFORMATION****International Inventories**

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
2,6-Di-tert-butyl-p-cresol	-	X	X	X	204-881-4	X	X	X	X	X	X	KE-03079

**National Regulations****SECTION 16. OTHER INFORMATION**

## 2,6-Di-tert-butyl-4-methylphenol

**Prepared By** Health, Safety and Environmental Department  
**Creation Date** 09-Mar-2010  
**Revision Date** 18-Mar-2021  
**Revision Summary** SDS sections updated.

**Training Advice**

Chemical incident response training.

**Legend**

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** (volatile organic compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Disclaimer**

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**End of Safety Data Sheet**