

## BHT

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

<b>Trade name</b>	BHT	
<b>Synonyms</b>	Butylated Hydroxytoluene; 2,6-di-tert-butyl-4-methyl phenol; 2,6-di-tert-butyl-p-cresol	
<b>Use</b>	Antioxidant, Food additive, Preservative	
<b>Company</b>	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)	
<b>Address</b>	292 State Route 8, Oil City, PA 16301	
<b>Telephone</b>	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424 9300
	CHEMTREC World Wide	(703) 527-3887
	Other Emergencies (24-hr)	(814) 677 2028
	SDS and Product Information (8:00am-4:30pm CST)	(814) 677 2028
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<b>E-mail address</b>	SasolElectronicSDS@us.sasol.com	

## SECTION 2 HAZARDS IDENTIFICATION

<b>OSHA/GHS Hazards</b>	Eye irritation	Category 2B
	Specific target organ toxicity - single exposure	Category 3 (Resp. irritation)
	Acute aquatic toxicity	Category 1
	Chronic aquatic toxicity	Category 1

### LABEL ELEMENTS

#### Hazard symbols



**Signal word** Warning

**Hazard statements** May form combustible dust concentrations in air (during processing)

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- H320 Causes eye irritation.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

- Prevention** P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P280 Wear eye protection/ face protection.  
P264 Wash skin thoroughly after handling.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
Prevent dust accumulation.
- Response** P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P391 Collect spillage.
- Storage** P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.
- Disposal** P501 Dispose of contents/ container to an approved waste disposal plant.

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**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**

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<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Butylated hydroxytoluene (BHT)	128-37-0	>=99

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

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**SECTION 4 FIRST AID MEASURES**

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- Eye contact** Remove contact lenses. Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

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- Skin contact** In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
- Inhalation** Remove person to fresh air. If signs/symptoms continue, get medical attention. Inhalation of vapours in high concentration may cause irritation of respiratory system.
- Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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**SECTION 5 FIREFIGHTING MEASURES**

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**FLAMMABLE PROPERTIES**

- Fire/explosion** May be ignited by open flame. Avoid dust formation. Dust may form explosive mixture in air. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.
- Suitable extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do NOT use water jet.
- Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus and protective suit.
- Further information** Evacuate personnel to safe areas. Stop source of fuel if possible. Do not allow run-off from fire fighting to enter drains or water courses.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

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- Methods and materials for containment and cleaning up** Evacuate personnel to safe areas. Prevent further leakage or spillage. Remove all sources of ignition. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Fine dust dispersed in air may ignite. Pick up and arrange disposal without creating dust. Non-sparking tools should be used. Sweep up and shovel into suitable containers for disposal. Non-disposable equipment should be thoroughly decontaminated with soap and water. Do not flush into surface water or sanitary sewer system.
- Spill precautions** Do not contaminate any lakes, streams, ponds, groundwater or soil.
- Reporting Requirements** Composition and extent of any spill should be evaluated against local regulations and reported to the proper agencies, if necessary.

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**SECTION 7 HANDLING AND STORAGE**

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**Safe handling advice** Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Provide sufficient air exchange and/or exhaust in work rooms. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. During processing, dust may form explosive mixture in air. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

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**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING MEASURES**

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure adequate ventilation, especially in confined areas.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes** Safety glasses with side-shields Molten form: Chemical resistant goggles must be worn. Face-shield.

**Skin** Impervious gloves. Long sleeved clothing Non-disposable equipment should be thoroughly decontaminated with soap and water.

**Inhalation** Use NIOSH approved respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**EXPOSURE GUIDELINES**

<u>Components</u>	<u>Exposure limit(s)</u>
<b>Butylated</b>	ACGIH TLV (8-hour) 2 mg/m <sup>3</sup> (inhalable fraction and/or vapor)
<b>hydroxytoluene (BHT)</b>	NIOSH Recommended Exposure Limit 10 mg/m <sup>3</sup>

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level

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**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance** solid

**Colour** white

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<b>Form</b>	crystalline pellets
<b>Odour</b>	mild
<b>Odour Threshold</b>	No data available
<b>Flash point</b>	118 °C, 244 °F; closed cup
<b>Flammability</b>	Upper explosion limit: No data available Lower explosion limit: No data available
<b>Boiling point/boiling range</b>	265 °C, 509 °F;
<b>Melting point/range</b>	69 - 70 °C, 156 - 158 °F;
<b>Auto-ignition temperature</b>	470 °C, 878 °F;
<b>Decomposition temperature</b>	No data available
<b>Flammability (solid, gas)</b>	Combustible material: may burn but does not ignite readily.
<b>Vapour pressure</b>	< 0.01 mm Hg @ 20 °C, 68 °F;
<b>Vapour density</b>	7.6
<b>Density</b>	0.6 g/cm <sup>3</sup> @ 25 °C, 77 °F;
<b>Relative density</b>	0.6 @ 25 °C, 77 °F;
<b>Water solubility</b>	0.4 - 1.14 mg/l practically insoluble
<b>Viscosity</b>	3.45 cSt @ 80 °C, 176 °F;
<b>Viscosity, dynamic</b>	No data available
<b>pH</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	log Pow: 5.1;
<b>Molecular weight</b>	220.34 g/mol
<b><u>Combustible dust</u></b>	

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<b>Max. pressure output</b>	7 - 9 bar
<b>Pressure Rise Rate</b>	800 - 1300 bar/s
<b>Deflagration index</b>	200 - 350 m.b/s
<b>Min. ignition energy</b>	10 - 25 mJ
<b>Lower explosion limit</b>	10 - 20 g/m <sup>3</sup>

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**SECTION 10 STABILITY AND REACTIVITY**

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<b>Reactivity</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Keep away from heat and sources of ignition.
<b>Hazardous decomposition products</b>	Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.
<b>Materials to avoid</b>	Strong acids. Strong bases. Oxidizing agents. Reducing agents.
<b>Hazardous polymerisation</b>	Hazardous polymerisation does not occur.

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**SECTION 11 TOXICOLOGICAL INFORMATION**

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<b>Acute dermal toxicity</b>	LD50 Rat: > 2,000 mg/kg Not classified due to data which are conclusive although insufficient for classification.
<b>Acute inhalation toxicity</b>	RD50: 32 mg/m <sup>3</sup> (TLV reference document)  Not classified due to data which are conclusive although insufficient for classification.
<b>Acute oral toxicity</b>	LD50 Rat: > 6,000 mg/kg
<b>Skin corrosion/irritation</b>	Not classified due to data which are conclusive although insufficient for classification.
<b>Serious eye damage/eye irritation</b>	Causes eye irritation.
<b>Respiratory or skin sensitisation</b>	human skin: not sensitizing
<b>Germ cell mutagenicity</b>	<b>Genotoxicity in vitro:</b> Type: Ames test Result: negative

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(literature value)

**Genotoxicity in vivo:**

Type: micronucleus assay (chromosome aberration);

Result: negative

Category approach

**Assessment Mutagenicity:**

Based on available data, the classification criteria are not met.

**Reproductive toxicity** **Reproductive toxicity:**

No data available

**Assessment Reproductive toxicity:**

No data available

**Teratogenicity:**

No data available

**Assessment teratogenicity:**

No data available

**STOT - single exposure** The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

**STOT - repeated exposure** The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity** Not applicable

**Carcinogenicity****Assessment carcinogenicity:**

Contains no ingredient listed as a carcinogen

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**SECTION 12** **ECOLOGICAL INFORMATION**

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**Aquatic toxicity** Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

**Toxicity to fish** LC50 (*Oryzias latipes* (Japanese medaka)) 96 hours: > 1 - 10 mg/l  
Test substance: 2,6-di-tert-butyl-4-methylphenol  
(literature value)

**Toxicity to aquatic invertebrates** EC50 (*Daphnia magna* (Water flea)) 48 hours: > 0.1 - 1 mg/l  
Test substance: 2,6-di-tert-butyl-4-methylphenol  
(literature value)

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<b>Toxicity to algae</b>	ErC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
	NOErC (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 0.1 - 1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
<b>Chronic toxicity to fish</b>	NOEC (Oryzias latipes (Japanese medaka)) 30 d: > 0.01 - 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
<b>Chronic toxicity to aquatic invertebrates</b>	NOEC (Daphnia magna (Water flea)) 21 d: > 0.01 - 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
<b>Biodegradation</b>	Not readily biodegradable.CO2 Evolution Test (28 d): < 60 % Test substance: 2,6-di-tert-butyl-4-methylphenol Product is slightly soluble in water.
<b>Bioaccumulative potential</b>	Test substance: 2,6-di-tert-butyl-4-methylphenol 646 L/kg ww (EPISuite BCF)
<b>Mobility in soil</b>	No data available
<b>Other adverse effects</b>	No data available

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**SECTION 13                      DISPOSAL CONSIDERATIONS**

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<b>Waste Code</b>	Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations.
<b>Disposal methods</b>	Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.
<b>Empty containers.</b>	Empty containers and original plastic liners may contain product residue. Handling of empty containers and liners should be in a manner to minimize dust generation. Safe handling procedures as outlined in the SDS should be followed at all times. Consult the appropriate official for information regarding disposal requirements.





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**SECTION 14                      TRANSPORT INFORMATION**

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**DOT**    not regulated

**IATA**    UN 3077, Environmentally hazardous substance, solid, n.o.s., (Butylated Hydroxytoluene), 9, III  
This product is regulated as a dangerous good when shipped by air in all quantities according to IATA.

**IMDG**    UN 3077, Environmentally hazardous substance, solid, n.o.s., (Butylated Hydroxytoluene), 9, III, Marine pollutant  
This product is regulated as a Marine Pollutant when shipped by water in all quantities according to the IMDG Code.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**Remarks**    No data available

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**SECTION 15                      REGULATORY INFORMATION**

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**U.S. FEDERAL REGULATIONS****TSCA Inventory Listing****Components**

Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-

**CAS-No.**

128-37-0

**SARA 302 Status****Components****CAS-No.****Weight percent**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 311/312 Classification**

Should this product meet EPCRA 311/312 Tier reporting criteria of 40 CFR 370, refer to Section 2 of this SDS for appropriate classification and Section 3 for components that meet the hazardous classification.

**SARA 313 Chemical****Components****CAS-No.****Weight percent**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US. EPA CERCLA Hazardous Substances (40 CFR 302)****Components****Reportable Quantity****Weight percent**

none

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**INTERNATIONAL REGULATIONS****WHMIS Classification**

Eye irritation	Category 2B
Specific target organ toxicity - single exposure	Category 3 (Resp. irritation)
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

**European Union**

Acute aquatic toxicity, Category 1  
Chronic aquatic toxicity, Category 1

Australia. Inventory of Chemical Substances (AICS)	Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS)	Listed
Japan. ISHL - Inventory of Chemical Substances	Listed
Canada. Domestic Substances List (DSL) Inventory	Listed
Canada. Non-Domestic Substance Listing (NDSL)	Not listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Listed
Korea. Existing Chemicals Inventory (KECI)	Listed
China. Inventory of Existing Chemical Substances (IECSC)	Listed
Mexico. National Inventory of Chemical Substances (INSQ)	Listed
New Zealand. Inventory of Chemical Substances (NZIoC)	Listed
Switzerland. Inventory of Notified New Substances (CHINV)	Listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

**STATE REGULATIONS****California Prop. 65****Components**

none

**CAS-No.**

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**SECTION 16 OTHER INFORMATION**

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**HAZARD RATINGS**

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
<b>HMIS®</b>	1	1	0
<b>NFPA</b>	1	1	0

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