

BUTYLATED HYDROXYTOLUENE (BHT)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

BUTYLATED HYDROXYTOLUENE (BHT)
2,6-Di-tert-butyl-4-methylphenol; DBPC
CAS: 128-37-0

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Antioxidant/stabilizer for plastics, rubber, petroleum products, cosmetics, animal feed and food-contact packaging; general industrial and pharmaceutical excipient use. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Aquatic Chronic 2	Hazardous to the aquatic environment, chronic hazard, Category 2, H411
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Based on well-established published GHS data, BHT is not classified for acute toxicity, skin/eye irritation, sensitization, carcinogenicity, mutagenicity or reproductive toxicity. It is classified only for chronic aquatic hazard by several commercial suppliers' SDS; some supplier SDS list it as "not classified" in all categories depending on the specific grade/purity. Refer to current supplier classification where used for regulatory purposes.

2.2 GHS label elements, including precautionary statements:

GHS: No signal word (not classified as hazardous for acute health effects)

Hazard statements:

Aquatic Chronic 2: H411 – Toxic to aquatic life with long lasting effects.

Precautionary statements:

P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of the contents/containers in accordance with regulations on hazardous waste or packaging and packaging waste, respectively.

2.3 Other hazards which do not result in classification:

Fine dust/powder may form combustible dust clouds in air; avoid generation of dust and sources of ignition. Not a PBT/vPvB substance per available data.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: 2,6-Di-tert-butyl-4-methylphenol
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 128-37-0	Butylated Hydroxytoluene — Aquatic Chronic 2: H411	≥ 99% (typical commercial grade)

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance if symptoms occur, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure to fresh air and keep at rest. Seek medical attention if discomfort continues.

By skin contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water. Seek medical advice if irritation persists.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes, lifting eyelids occasionally. Remove contact lenses if present and easy to do. Seek medical advice if irritation persists.

By ingestion/aspiration:

Rinse mouth with water. Do not induce vomiting. Seek medical advice if feeling unwell. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed:

No significant acute symptoms expected under normal handling conditions. See sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Not relevant; treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:
Suitable: Water spray/fog, foam, dry chemical powder, carbon dioxide
Unsuitable: High-pressure water jet (may scatter and spread fire)

5.2 Specific hazards arising from the chemical:
Combustible solid. Fine powder may form explosive dust-air mixtures. Thermal decomposition/combustion may release carbon monoxide, carbon dioxide and irritant smoke.

5.3 Special protective actions for fire-fighters:
Evacuate non-essential personnel. Wear self-contained breathing apparatus and full protective clothing in enclosed areas. Cool closed containers exposed to fire with water spray.

Additional provisions:
Avoid dust formation during fire-fighting/clean-up. Contain fire-fighting water run-off to prevent environmental release.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:
Avoid generating dust. Use PPE described in section 8. Ensure adequate ventilation.

For emergency responders:
Wear appropriate protective equipment as per section 8. Avoid ignition sources near spilled dust.

6.2 Environmental precautions:
Avoid release to drains, water courses and soil. Contain spillage.

6.3 Methods and materials for containment and cleaning up:
Sweep up (avoid dust generation) and place in a suitable, labelled container for disposal or recovery. Avoid dry sweeping where dust clouds could form; use vacuum cleaning with appropriate dust-rated equipment where possible.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

- A. General precautions for safe use:**
Avoid generating dust. Provide adequate ventilation. Keep away from strong oxidizers and sources of ignition.
- B. Technical recommendations for the prevention of fires and explosions:**
Use dust-tight equipment and anti-static earthing where handling in bulk/powder form to control combustible dust hazard. Keep away from heat and open flame.
- C. Technical recommendations on general occupational hygiene:**
Do not eat, drink or smoke while handling. Wash hands after handling.
- D. Technical recommendations to prevent environmental risks:**
Prevent release to drains and watercourses. Follow the protective measures given in section 8.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	Ambient
Maximum Temp.	30°C
Maximum time	24 Months (unopened, in original packaging)

B. General conditions for storage:
Store in a cool, dry, well-ventilated place away from direct sunlight, strong oxidizers and sources of ignition. Keep containers tightly closed.

7.3 Specific end use(s):
Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

No specific occupational exposure limit is established for BHT under Indian regulations. General particulate-not-otherwise-classified guidance values may be applied by the employer's industrial hygienist.

Identification	Occupational Exposure Limit Type	Value
Butylated Hydroxytoluene CAS: 128-37-0	No established OEL (general dust: TWA)	Typical value – refer to current specification sheet

8.2 Appropriate engineering controls:
Use local exhaust ventilation or dust extraction where powder/dust is generated, in addition to PPE as needed.

B. Respiratory protection:
Not normally required with adequate ventilation. Use a particulate (dust) respirator (FFP2/N95) if dust levels are elevated or ventilation is inadequate.

C. Specific protection for the hands:
Chemical-resistant gloves (e.g. nitrile) recommended for prolonged or repeated handling.

D. Eye and face protection:
Safety glasses with side shields; use chemical goggles where dust generation is significant.

E. Bodily protection:
Standard industrial workwear; antistatic clothing recommended where combustible dust may be present.

F. Additional emergency measures:
Eyewash station and washing facilities should be available in the work area.

Environmental exposure controls:
Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Solid (crystalline powder/flakes/prills)
Appearance	White to pale yellow crystalline solid
Color	White to off-white
Odor	Faint characteristic phenolic odour
Odour threshold	Not established

Volatility	
Boiling point at atmospheric pressure	265°C
Vapour pressure at 20°C	<0.01 mm Hg (negligible)
Evaporation rate at 20°C	Not relevant (solid)
Product Description	
Density / Relative density at 20°C	~1.05 g/cm³
Dynamic / Kinematic viscosity	Non-applicable (solid)
Concentration	≥99% (typical commercial grade)
pH	Non-applicable (insoluble in water)
Vapour density	Not relevant
Partition coefficient n-octanol/water (log Pow)	~5.1
Solubility in water at 20°C	Practically insoluble (<1 mg/L); soluble in oils, alcohols, ketones
Decomposition temperature	Typical value – refer to current specification sheet
Melting point/freezing point	69–70°C
Flammability	
Flash Point	127°C (closed cup, typical)
Flammability (solid, gas)	Combustible solid; not readily flammable
Autoignition temperature	>300°C (typical)
Lower / Upper flammability limit	Not established
Particle Characteristics	
Median equivalent diameter	Varies by grade (powder/flake/prill) – refer to current specification sheet

* Values are typical for the commercial grade; refer to current specification sheet for batch-specific data.

9.2 Other information:

Explosive properties	Not classified; fine dust may be combustible
Oxidising properties	Not relevant – not an oxidiser
Corrosive to metals	Not relevant
Heat of combustion	Not established
Surface tension	Not relevant
Refraction index	Not relevant

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:
Stable under normal conditions of use. May react with strong oxidizing agents.
- 10.2 Chemical stability:
Chemically stable under the indicated conditions of storage, handling and use.
- 10.3 Possibility of hazardous reactions:
Under the specified conditions, hazardous reactions are not expected. Fine dust clouds may be combustible in the presence of an ignition source.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Avoid generating dust clouds	Not applicable	Avoid prolonged heating above flash point	Avoid prolonged direct exposure	No special measures

10.5 Incompatible materials:

Strong Oxidizers	Strong Acids/Bases	Ignition Sources
Avoid contact	No specific reaction known	Keep away

- 10.6 Hazardous decomposition products:
Thermal decomposition may release carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects:
Based on well-established published data for this CAS number, BHT exhibits low acute toxicity.
- A. Ingestion (acute effect):
Low acute oral toxicity. Large doses may cause gastrointestinal discomfort.
- B. Inhalation (acute effect):
Dust may cause mild irritation of the respiratory tract.
- C. Contact with skin and eyes (acute effect):
May cause mild irritation on prolonged/repeated contact; not classified as a skin or eye irritant per standard GHS criteria.
- D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):
Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not classifiable (Group 3, not a human carcinogen per available weight of evidence).
- E. Sensitizing effects:
Not classified as a skin or respiratory sensitizer based on available data.
- F. Specific target organ toxicity (STOT) – single exposure:
Classification criteria are not met based on available data.
- G. Specific target organ toxicity (STOT) – repeated exposure:
Classification criteria are not met based on available data.
- H. Aspiration hazard:
Non-applicable (solid).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
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Butylated Hydroxytoluene CAS: 128-37-0	LD50 oral: ~1700 mg/kg	Rat
	LD50 dermal: >2000 mg/kg	Rabbit

SECTION 12: ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: ~1.0–3.0 mg/L (96h)	Non-applicable	Fish
EC50: ~1.0 mg/L (48h)	Non-applicable	Crustacean (Daphnia)

12.2 Persistence and degradability:

Low ready biodegradability under standard test conditions (not readily biodegradable). Degrades slowly via photolysis and biotic processes in the environment.

12.3 Bioaccumulative potential:

High potential for bioaccumulation indicated by high log Pow (~5.1); BCF data limited – refer to current specification sheet.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
High (low mobility expected)	Low	No significant mobility expected	No significant mobility expected

12.5 Results of PBT and vPvB assessment:

Not formally assessed as PBT/vPvB under available regulatory frameworks for this grade.

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dispose of in accordance with local, state and national regulations. Do not discharge to drains or watercourses. Incineration at a licensed facility is a suitable disposal route. Empty containers may retain product residue; dispose of as per label/regulatory guidance.
Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-hazardous for transport
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Not regulated (non-dangerous goods)
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-hazardous for transport
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product. BHT is permitted as a food/feed antioxidant and cosmetic ingredient within specified concentration limits under applicable Indian (FSSAI) and international regulations; refer to current specification sheet for grade-specific compliance status.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Food Safety and Standards Act, 2006 (where applicable to food/feed grade)

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

H411: Toxic to aquatic life with long lasting effects.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

Published GHS classification data and standard chemical reference sources for CAS 128-37-0.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | BCF: Bioconcentration factor | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log-POW: Octanol-water partition coefficient | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET