

## TECHNICAL DATA SHEET

**Product Name:** BHT

**INCI Name:** Butylated Hydroxytoluene

**CAS:** 128-37-0

**Chemical Classification:** Phenol

**Functional Category:** Antioxidant, fragrance stabilizer

**Origin of Raw Material:** EU

**IUPAC Name:** 2,6-Di-tert-butyl-4-methylphenol

**Description:** Butylated Hydroxytoluene (BHT) is a synthetic derivative of phenol, a lipophilic chemical compound used primarily in cosmetics as an antioxidant and fragrance stabilizer. It has a melting point of 70°C and a purity of 99%. It appears as crystals ranging from white to yellow in color, with a characteristic odor. It is insoluble in water but partially soluble in ethyl alcohol, isopropyl alcohol, and oils.

### Benefits:

- **Antioxidant Activity:** Antioxidants like BHT stabilize free radicals. Free radicals are unstable molecules that can initiate a chain reaction of oxidation, leading to the degradation of organic molecules. This degradation can cause changes in color, odor, and texture of products.

- **Neutralization of Free Radicals:** BHT acts by "donating" a hydrogen to free radicals, turning them into less reactive compounds. This donation stabilizes the free radical and prevents it from reacting with other molecules. After donating a hydrogen, BHT turns into a stable radical compound. This newly formed radical is much less reactive than the original free radicals, thereby reducing the oxidation chain reaction that would otherwise continue to damage the product.

- **Stabilizes Fragrances:** BHT helps stabilize fragrances within cosmetic products, ensuring that the fragrance remains consistent throughout the product's life.

- **Extends Shelf Life and Preserves Quality:** BHT effectively extends the shelf life of cosmetic products, prevents the rancidity of fats and oils, extends the shelf life, and

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stabilizes colors used in cosmetic products.

**Usage:** It is part of the oil phase. Used in concentrations of 0.01-0.1%, best in combination with EDTA. For external use only.

**Application:** Used to stabilize all types of cosmetic creams, lotions, shampoos, decorative cosmetics, and sunscreen products.

**Source Raw Materials:** p-Cresol and isobutylene

**Method of Production:** BHT is produced by reacting p-cresol (4-methylphenol) with isobutylene (2-methylpropene) in the presence of sulfuric acid, which acts as a catalyst for the reaction.

**Animal Testing:** The substance has not been tested on animals

**GMO:** Non-GMO

**Vegan:** Does not contain components of animal origin