

## TERT-BUTYL HYDROQUINONE (TBHQ)

### SECTION 1: PRODUCT IDENTIFICATION

**Product Name:** TERT-BUTYL HYDROQUINONE (TBHQ)

**Product Code:** 144

**CAS#:** 1948-33-0

**Chemical Formula:** C<sub>10</sub>H<sub>14</sub>O<sub>2</sub>

**Molecular Weight:** 166.22

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

**Composition:**

**Synonyms:** TERT-BUTYL HYDROQUINONE (TBHQ)

**Chemical Formula:** C<sub>10</sub>H<sub>14</sub>O<sub>2</sub>

**Molecular Weight:** 166.22

### SECTION 3: HAZARDS IDENTIFICATION

**Classification of the substance or mixture:** Classification according to Regulation (EC) No 1272/2008:

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Skin sensitization (Category 1), H317

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

**Other hazards:** This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

### SECTION 4: FIRST AID MEASURES

**Description of first-aid measures:**

**If inhaled:** After inhalation: fresh air.

**In case of skin contact:** In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

**In case of eye contact:** After eye contact: rinse out with plenty of water. Remove contact lenses.

**If swallowed:** After swallowing: make victim drink water. Consult doctor if feeling unwell.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labeling and/or in section

**Indication of any immediate medical attention and special treatment needed:** Not available

### SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing media:**

**Suitable extinguishing media:** Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Unsuitable extinguishing media:** For this substance/mixture no limitations of extinguishing agents are given.

**Special hazards arising from the substance or mixture:** Carbon oxides, Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

**Advice for firefighters:** In the event of fire, wear self-contained breathing apparatus.

**Further information:** Prevent fire extinguishing water from contaminating surface water or the ground water system.



## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, and consult an expert.

**Environmental precautions:** Do not let product enter drains.

**Methods and materials for containment and cleaning up:** Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## SECTION 7: HANDLING AND STORAGE

**Precautions:** Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.

**Conditions for safe storage, including any incompatibilities:**

**Storage Conditions:** Tightly closed. Dry.

**Storage class:** Storage class (TRGS 510): 13: Non Combustible Solids

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure controls:**

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment:**

**Eye/face protection:** Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection:** Flame retardant antistatic protective clothing.

**Respiratory protection:** required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system

**Control of environmental exposure:** Do not let product enter drains.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance	:	White to off white colour powder
Odor	:	Not available
Color	:	Not available
Molecular Weight	:	Not available
pH	:	Not available
Boiling Point	:	Not available
Melting Point	:	Not available
Critical Temperature	:	Not available
Specific Gravity	:	Not available
Vapor Pressure	:	Not available
Vapor Density	:	Not available
Volatility	:	Not available
Odor Threshold	:	Not available
Water/Oil Dist. Coeff.	:	Not available
Iconicity (in Water)	:	Not available
Dispersion Properties	:	Not available
Solubility	:	Not available

### SECTION 10: STABILITY AND REACTIVITY DATA

**Reactivity:** Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**Chemical stability:** The product is chemically stable under standard ambient conditions (room temperature).

**Possibility of hazardous reaction:** Violent reactions possible with:

Strong oxidizing agents

**Conditions to avoid:** Not available

**Incompatible materials:** Not available

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

**Acute toxicity:** LD50 Oral - Rat - male - 951 mg/kg Remarks: (ECHA)

Inhalation: Irritating to respiratory system

LD50 Dermal - Guinea pig - 500 - 1.000 mg/kg Remarks: (ECHA)

**Skin corrosion/irritation:** Skin - Guinea pig Result: Skin irritation - 48 h Remarks: (ECHA)

**Serious eye damage/eye irritation:** Eyes - Rabbit Result: Causes serious eye irritation. - 14 d Remarks: (ECHA)

**Respiratory or skin sensitization:** Sensitisation test: - In vitro study Result: positive Remarks: (ECHA)

**Carcinogenicity:** Did not show carcinogenic effects in animal experiments

**Reproductive toxicity:** Not available

**Specific target organ toxicity - single exposure:** Not available

**Specific target organ toxicity - repeated exposure:** Not available

**Aspiration hazard:** Not available

### SECTION 12: ECOLOGICAL INFORMATION

#### Toxicity:

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - 0,3 - 0,48 mg/l - 96 h

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 9,3 mg/l - 72 h

#### Persistence and degradability:

Biodegradability Result: 52,91 % - Inherently biodegradable

Biochemical Oxygen Demand (BOD) 70 mg/g

Chemical Oxygen 2.200 mg/g

**Bio accumulative potential:** Not available

**Mobility in soil:** Not available

**Results of PBT and vPvB assessment:** This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

#### Endocrine disrupting properties:

**Product Assessment :** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**SECTION 14: TRANSPORT INFORMATION****UN number:****ADR/RID:** 3077**IMDG:** 3077**IATA:** 3077**UN proper shipping name****ADR/RID:** Environmentally hazardous substance, solid, n.o.s. (2-tert-Butylhydroquinone)**IMDG:** Environmentally hazardous substance, solid, n.o.s. (2-tert-Butylhydroquinone)**IATA:** Environmentally hazardous substance, solid, n.o.s. (2-tert-Butylhydroquinone)**Transport hazard class (es):****ADR/RID:** 9**IMDG:** 9**IATA:** 9**Packaging group:****ADR/RID:** III**IMDG:** III**IATA:** III**Environmental hazards:****ADR/RID:** yes**IMDG:** yes**IATA:** yes**SECTION 15: REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture:** This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Chemical Safety Assessment:** For this product a chemical safety assessment was not carried out

**SECTION 16: OTHER INFORMATION****References: Full text of H-Statements:**

H302 Harmful if swallowed.

H302 + H312 Harmful if swallowed or in contact with skin.

H312 Harmful in contact with skin

H315 Harmful if swallowed or in contact with skin.

H317 Causes skin irritation.

H319 May cause an allergic skin reaction.

H400 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects

**Other Special Considerations:** Not available

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. The information is offered solely for user 's obligation to investigate and determine the suitability of the information for their particular purpose.