

Chemical Safety Data Sheet MSDS / SDS

tert-Butylhydroquinone

Revision Date:2026-07-18 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Product name : tert-Butylhydroquinone
CBnumber : CB0415105
CAS : 1948-33-0
EINECS Number : 217-752-2
Synonyms : TBHQ, Tert-butylhydroquinone

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

Hazard statements

H410 Very toxic to aquatic life with long lasting effects

H319 Causes serious eye irritation

H317 May cause an allergic skin reaction

H315 Causes skin irritation

SECTION 3: Composition/information on ingredients

Substance

Product name	: tert-Butylhydroquinone
Synonyms	: TBHQ, Tert-butylhydroquinone
CAS	: 1948-33-0
EC number	: 217-752-2
MF	: C ₁₀ H ₁₄ O ₂
MW	: 166.22

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

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. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

4.4 Notes to physician

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

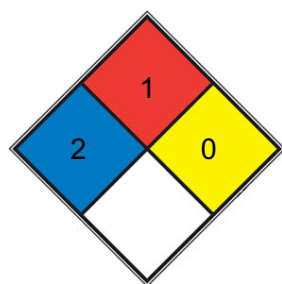
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

SPEC.

HAZ.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of

properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 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

8.1 Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-

approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,

Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

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Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

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

Information on basic physicochemical properties

a) Physical state	powder
b) Color	off-white
c) Odor	characteristic
d) Melting point/freezing point	Melting point/range: 104 - 107.3 °C at 972.2 hPa - OECD Test Guideline 102
e) Initial boiling point and boiling range	295 °C
f) Flammability (solid, gas)	The product is not flammable.
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	91 °C - closed cup
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	4.56 at 25 °C
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	2,887.35 g/l at 25 °C - OECD Test Guideline 105- soluble
n) Partition coefficient n-octanol/water	log Pow: 1.52 at 25 °C - Bioaccumulation is not expected.
o) Vapor pressure	0.004Pa at 25°C

p) Density	0.78 g/cm ³ at 20 °C - OECD Test Guideline 109
Relative density	295
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none
Solubility	DMSO (Slightly), Methanol (Slightly)

9.2 Other safety information

Solubility in other solvents

Methanol 3,000 g/l at 30 °C solvents

Dissociation constant 0 at 30 °C

SECTION 10: Stability and reactivity

10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.2 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

Bases

10.3 Conditions to avoid

Strong heating.

10.4 Incompatible materials

No data available

10.5 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 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)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vivo micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal

Result: negative

Remarks: (ECHA)

Carcinogenicity

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

Repeated dose toxicity - Rat - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 200 mg/kg - LOAEL (Lowest observed adverse effect level) - 200 mg/kg

Remarks: (ECHA)

RTECS: MX4375000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - 0.3 - 0.48 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia static test EC50 - Daphnia magna (Water flea) - 0.57 mg/l - 48 h and other aquatic (OECD Test Guideline 202)
invertebrates

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 9.3 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability

Result: 52.91 % - Inherently biodegradable.

(OECD Test Guideline 301D)

Biochemical Oxygen 70 mg/g

Demand (BOD) Remarks: (External MSDS) 2,000 mg/g

Remarks: (External MSDS)

Chemical Oxygen 2,200 mg/g

Demand (COD) Remarks: (External MSDS)

Theoretical oxygen 2,450 mg/g demand Remarks: (External MSDS)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Additional ecological Discharge into the environment must be avoided.

information

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3077

IMDG: 3077

IATA-DGR: 3077

14.2 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-DGR: Environmentally hazardous substance, solid, n.o.s. (2-tert-Butylhydroquinone)

14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA-DGR: 9

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA-DGR: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: yes

14.6 Special precautions for user

14.7 Incompatible materials

Further information: EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L , not dangerous goods of

Class 9

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.