



# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 02/05/2015

Version 1.2

## SECTION 1. Identification

### Product identifier

Product number	841424
Product name	tert-Butylhydroquinone for synthesis
CAS-No.	1948-33-0

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

Identified uses	Chemical for synthesis
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Acute toxicity, Category 4, Oral, H302  
Eye irritation, Category 2A, H319  
Skin sensitization, Category 1, H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

#### *Hazard pictograms*



#### *Signal Word*

Warning

#### *Hazard Statements*

H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

#### *Precautionary Statements*

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P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/ eye protection/ face protection.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Formula	C <sub>10</sub> H <sub>14</sub> O <sub>2</sub> (Hill)
Molar mass	166.21 g/mol

### Hazardous ingredients

*Chemical Name ( Concentration)*

CAS-No.

*2-tert-Butylhydroquinone ( >= 90 % - <= 100 % )*

1948-33-0

Exact percentages are being withheld as a trade secret.

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## SECTION 4. First aid measures

### Description of first-aid measures

#### *Inhalation*

After inhalation: fresh air.

#### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

#### *Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

#### *Ingestion*

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

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

irritant effects, Allergic reactions

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### Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

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

### Special hazards arising from the substance or mixture

Combustible material

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

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

### Advice for firefighters

*Special protective equipment for fire-fighters*

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

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### Environmental precautions

Do not empty into drains.

### 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.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Store at +15°C to +25°C (+59°F to +77°F).

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### SECTION 8. Exposure controls/personal protection

#### Exposure limit(s)

Contains no substances with occupational exposure limit values.

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

#### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

#### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

#### Eye/face protection

Safety glasses

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Other protective equipment:

protective clothing

#### Respiratory protection

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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### SECTION 9. Physical and chemical properties

Physical state	powder, finecrystalline
Color	light brown
Odor	weak
Odor Threshold	No information available.
pH	No information available.
Melting point	127 - 129 °C
Boiling point/boiling range	563 °F ( 295 °C) at 1,013 hPa
Flash point	340 °F ( 171 °C)
Evaporation rate	No information available.

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Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.05 g/cm <sup>3</sup> at 68 °F ( 20 °C)
Relative density	No information available.
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	log Pow: 2.94 (calculated) (Lit.) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Ignition temperature	855 °F ( 457 °C)

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### SECTION 10. Stability and reactivity

#### Reactivity

Forms explosive mixtures with air on intense heating.

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 reactions

Violent reactions possible with:

Strong oxidizing agents, Bases

#### Conditions to avoid

Strong heating.

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### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Eye contact, Skin contact, Ingestion

#### *Acute oral toxicity*

LD50 Rat: 700 mg/kg (RTECS)

absorption

#### *Eye irritation*

Rabbit

Result: Severe irritations

Causes serious eye irritation.

#### *Sensitization*

Sensitization test: Guinea pig

Result: positive

(External MSDS)

May cause sensitization by skin contact.

May cause an allergic skin reaction.

#### *Genotoxicity in vivo*

In vivo micronucleus test

Mouse

Result: negative

(National Toxicology Program)

#### *Genotoxicity in vitro*

Salmonella typhimurium

Result: negative

(National Toxicology Program)

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

(National Toxicology Program)

#### *CMR effects*

Carcinogenicity:

Did not show carcinogenic effects in animal experiments.

#### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### *Specific target organ systemic toxicity - repeated exposure*

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

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### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

### **Carcinogenicity**

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### **Further information**

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12. Ecological information**

### **Ecotoxicity**

#### *Toxicity to fish*

LC50 Pimephales promelas (fathead minnow): 0.6 mg/l; 96 h (External MSDS)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 3.2 mg/l; 96 h (External MSDS)

### **Persistence and degradability**

#### *Biochemical Oxygen Demand (BOD)*

70 mg/g ( 5 d)

(External MSDS)

2,000 mg/g ( 20 d)

(External MSDS)

#### *Chemical Oxygen Demand (COD)*

2,200 mg/g

(External MSDS)

#### *Theoretical oxygen demand (ThOD)*

2,450 mg/g

(External MSDS)

### **Bioaccumulative potential**

#### *Partition coefficient: n-octanol/water*

log Pow: 2.94

(calculated)

(Lit.) Bioaccumulation is not expected.

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### Mobility in soil

No information available.

### *Additional ecological information*

Discharge into the environment must be avoided.

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( TERT-BUTYLHYDROQUINONE)

Class

9

Packing group

III

Environmentally hazardous

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### Air transport (IATA)

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( TERT-BUTYLHYDROQUINONE)

Class

9

Packing group

III

Environmentally hazardous

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Special precautions for user

no

### Sea transport (IMDG)

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. ( TERT-BUTYLHYDROQUINONE)

Class

9

Packing group

III

Environmentally hazardous

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Special precautions for user

yes

EmS

F-A S-F

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## SECTION 15. Regulatory information

United States of America

SARA 313



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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.

### SARA 302

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

### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

### DEA List I

Not listed

### DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

### Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

KOREA: Not in compliance with the inventory

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



*Signal Word*

Warning

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### *Hazard Statements*

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

### *Precautionary Statements*

#### Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves.

#### Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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

### **Full text of H-Statements referred to under sections 2 and 3.**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 02/05/2015

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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