

SAFETY DATA SHEET

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

Product identifier

Product name: Eastman(TM) DTBHQ

Product No.: EAN 905681. 00901-00, P0090102, P0090103, P0090106

Synonyms, Trade Names: 00901-00

Additional identification

Chemical name: 2,5-di-tert-butylhydroquinone
CAS-No.: 88-58-4

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

Identified uses: Inhibitor

Uses advised against: None known.

Details of the supplier of the safety data sheet**Manufacturer / Supplier**

Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard classification:**Health hazards**

Acute toxicity (Oral)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity - single exposure	Category 3

OSHA Specified Hazards:

Combustible dust May form combustible dust concentrations in air.

Warning label items including precautionary statement:**Pictogram:**



Signal words: WARNING!

Hazard Statement(s): May form combustible dust concentrations in air.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary statement:

Prevention: P210: Keep away from heat/sparks/open flames. - No smoking.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
2,5-di-tert-butylhydroquinone	100%	CAS-No.: 88-58-4	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation:	Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion:	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:	May irritate and cause redness and pain. May cause skin depigmentation.
---	---

Indication of any immediate medical attention and special treatment needed

Hazards:	None known.
Treatment:	Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards:	Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.
Extinguishing media	
Suitable extinguishing media:	Water spray. Dry chemical. Carbon Dioxide.
Unsuitable extinguishing media:	None known.
Special hazards arising from the substance or mixture:	Powdered material may form explosive dust-air mixtures.
Advice for firefighters	
Special fire fighting procedures:	Minimize dust generation and accumulation.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment.
Environmental precautions:	Avoid release to the environment.
Methods and material for containment and cleaning up:	Sweep up and place in a clearly labeled container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling:	Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities:	Keep container closed.
Specific end use(s):	Inhibitor

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Eye bath. Washing facilities. Safety shower.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection:

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other: No data available.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures: Observe good industrial hygiene practices.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical State:	Solid
Form:	solid (crystal)
Color:	White
Odor:	Odorless
Odor Threshold:	Not determined.
pH:	Not applicable
Melting Point	215 °C
Boiling Point:	321 °C
Flash Point:	216 °C (Cleveland Open Cup)
Evaporation Rate:	Not determined.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)—:	No data available.
Flammability Limit - Lower (%)—:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Specific Gravity:	1.07
Solubility(ies)	
Solubility in Water:	Negligible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	421 °C (ASTM D2155)
Decomposition Temperature:	(DTA) No exotherm to boiling
Dynamic Viscosity:	No data available.
Kinematic viscosity:	Not determined.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions to avoid:	None at ambient temperatures.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information**Information on likely routes of exposure**

Inhalation:	May cause respiratory irritation.
Ingestion:	Harmful if swallowed.
Skin contact:	Causes skin irritation. May cause skin depigmentation.
Eye contact:	Causes eye irritation.

Information on toxicological effects**Acute Toxicity****Oral**

Product:	No data available.
-----------------	--------------------

Specified substance(s)

2,5-di-tert-butylhydroquinone	Oral LD-50: (Rat): 800 - 1,600 mg/kg
-------------------------------	--------------------------------------

Dermal

Product:	No data available.
-----------------	--------------------

Specified substance(s)

2,5-di-tert-butylhydroquinone	Dermal LD-50: (Guinea Pig): > 21,000 mg/kg (highest dose tested)
-------------------------------	--

Inhalation

Product:	No data available.
-----------------	--------------------

Specified substance(s)

2,5-di-tert-butylhydroquinone	No data available.
-------------------------------	--------------------

Repeated dose toxicity

Product:	No data available.
-----------------	--------------------

Specified substance(s)

2,5-di-tert-butylhydroquinone	No data available.
-------------------------------	--------------------

Skin corrosion/irritation:

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone (Rabbit, 24 h): slight to moderate

Serious eye damage/eye irritation:

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone (Rabbit): strong

Respiratory or skin sensitization:

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone Skin Sensitization: (Guinea Pig) - non-sensitizing

Mutagenicity**In vitro**

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone No data available.

In vivo

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone No data available.

Carcinogenicity

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone Respiratory tract irritation. - Read-across from a similar material

Specific target organ toxicity - repeated exposure

Product: No data available.

Specified substance(s)

2,5-di-tert-butylhydroquinone No data available.

Aspiration hazard**Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Other adverse effects:

No data available.

SECTION 12: Ecological information**Toxicity****Acute toxicity****Fish****Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone LC-50 (Fathead Minnow, 96 h): 0.6 mg/l Read-across from a similar material

Aquatic invertebrates**Product:** No data available.**Specified substance(s)**2,5-di-tert-butylhydroquinone LC-50 (Water Flea, 96 h): 3.2 mg/l Read-across from a similar material
LC-50 (snail, 96 h): 32 mg/l Read-across from a similar material
LC-50 (flatworm, 96 h): 3.2 mg/l Read-across from a similar material**Chronic Toxicity****Fish****Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Aquatic invertebrates**Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Toxicity to Aquatic Plants**Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Persistence and degradability**Biodegradation****Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone 19 % (28 d) Read-across from a similar material

Biological Oxygen Demand:**Product** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Chemical Oxygen Demand:**Product** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

BOD/COD ratio**Product** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Bioaccumulative potential**Product:** No data available.**Specified substance(s)**

2,5-di-tert-butylhydroquinone No data available.

Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

2,5-di-tert-butylhydroquinone No data available.

**Results of PBT and vPvB
assessment:**

No data available.

2,5-di-tert-butylhydroquinone No data available.

Other adverse effects:

No data available.

SECTION 13: Disposal considerations**Waste treatment methods****General information:** No data available.**Disposal methods:**

Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Class not regulated

Possible Shipping Description(s):

not regulated

IMDG - International Maritime Dangerous Goods Code

Marine pollutant.: (2,5-di-tert-butylhydroquinone)

Possible Shipping Description(s):

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,5-di-tert-butylhydroquinone) 9 III

IATA

Class not regulated

Possible Shipping Description(s):

UN 3077 Environmentally hazardous substance, solid, n.o.s. (2,5-di-tert-butylhydroquinone) 9 III

SECTION 15: Regulatory information

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

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: D/2/B

SARA 311-312 Hazard Classification(s):

immediate (acute) health hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List

NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 2, Flammability - 1, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: New SDS

Key literature references and sources for data: No data available.

Training information: No data available.

Issue date: 05/21/2014

SDS No.:

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.