

## P-TERT-BUTYLPHENOL

# Material Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

**Trade name** P-TERT-BUTYLPHENOL**Synonyms** para-Tert-Butylphenol; 4-t-Butylphenol**Use** Industrial use, Raw material for chemical processes**Manufacturer/Supplier** Sasol North America Inc.**Address** 900 Threadneedle, Ste 100, Houston, TX 77079

<b>Telephone</b>	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424-9300
	CHEMTREC World Wide	(703) 527-3887
	Other Emergencies (24-hr)	(337) 494-5142
	MSDS and Product Information (8:00am-4:30pm CST)	(281) 588-3491
	Health and Safety Information (8:00am-4:00pm CST)	(281) 588-3492

**E-mail address** info@us.sasol.com

## SECTION 2 HAZARDS IDENTIFICATION

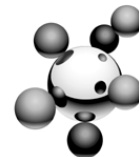
### Emergency Overview

**Appearance** white solid**Odour** phenolic**Precautions** **WARNING!** CAUSES EYE, SKIN AND RESPIRATORY IRRITATION. Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapour or mist. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.**Environmental precautions** Do not flush into surface water or sanitary sewer system. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Readily biodegradable.

### Potential Health Effects

**Eyes** Irritating to eyes.**Skin** Irritating to skin.**Inhalation** Irritating to respiratory system.**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

(See Section 11 for Toxicological Information)



## P-TERT-BUTYLPHENOL

### SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS

**Ingredients**

Phenol, 4-(1,1-dimethylethyl)-

**CAS-No.**

98-54-4

**Weight %**

98

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

### SECTION 4 FIRST AID MEASURES

- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
- Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.
- Ingestion** Do not induce vomiting without medical advice. Call a physician immediately. Never give anything by mouth to an unconscious person.

### SECTION 5 FIRE-FIGHTING MEASURES

**FLAMMABLE PROPERTIES**

**Flash point** ca. 115 °C PMCC 239 °F

**Autoignition temperature** ca. 510 °C 950 °F

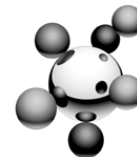
**Flammable limits in air % by volume** **Lower explosion limit:** no data available  
**Upper explosion limit:** no data available

**Fire and explosion** NFPA Class IIIB combustible liquid. During processing, dust may form explosive mixture in air.

**Extinguishing media** Water spray or fog, foam, dry chemical, CO<sub>2</sub>.

**Fire fighting instructions** Wear self-contained breathing apparatus and protective suit.

**Further information** Keep containers and surroundings cool with water spray. Avoid dust formation.



## P-TERT-BUTYLPHENOL

---

### SECTION 6 ACCIDENTAL RELEASE MEASURES

**Steps to be taken in case of spill or leak** Remove all sources of ignition. Avoid dust formation. Ensure adequate ventilation. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

---

### SECTION 7 HANDLING AND STORAGE

**Safe handling advice** During processing, dust may form explosive mixture in air. Provide appropriate exhaust ventilation at places where dust is formed. In case of inadequate ventilation wear respiratory protection. Keep away from direct sunlight.

**Storage/Transport temperature** ≤ 35 C

**Load/Unload temperature** Ambient

---

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

#### ENGINEERING MEASURES

Ensure adequate ventilation, especially in confined areas.

#### PERSONAL PROTECTIVE EQUIPMENT

**Eyes** Chemical resistant goggles must be worn. Face-shield

**Skin** Wear suitable protective clothing, gloves and eye/face protection.

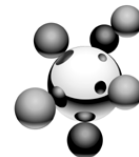
**Inhalation** Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors.

#### EXPOSURE GUIDELINES

Components Exposure limit(s)  
Contains no substances with occupational exposure limit values.

PEL= Permissible Exposure Limits  
TLV= Threshold Limit Value  
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)  
STEL= Short Term Exposure Limit (15 min.)  
WEEL= Workplace Environmental Exposure Level



## P-TERT-BUTYLPHENOL

---

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	solid
<b>Color</b>	white
<b>Odor</b>	phenolic
<b>Form</b>	flakes
<b>Boiling point/boiling range</b>	237 °C 459 °F
<b>Vapor pressure</b>	< 0.01 hPa @ 20 °C ca. 10 hPa @ 110 °C
<b>Vapour density</b>	None.
<b>Solubility(water)</b>	0.5 g/l
<b>Viscosity</b>	no data available
<b>Melting point/range</b>	ca. 100 °C 212 °F
<b>Density</b>	0.92 g/cm <sup>3</sup> @ 110 °C 450,000 g/cm <sup>3</sup> Bulk density
<b>Partition coefficient: n-octanol/water</b>	log Pow: 3.29

---

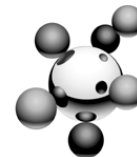
### SECTION 10 STABILITY AND REACTIVITY

<b>Conditions to avoid</b>	Stable under recommended storage conditions. Keep away from heat and sources of ignition.
<b>Hazardous decomposition products</b>	phenol olefins
<b>Materials to avoid</b>	Oxidizing agents Acids
<b>Hazardous polymerization</b>	None.

---

### SECTION 11 TOXICOLOGICAL INFORMATION

<b>Additional Remarks</b>	The product may be absorbed through the skin. May cause depigmentation (Vitiligo).
---------------------------	--



## P-TERT-BUTYLPHENOL

---

**Eyes** Causes severe irritation

**Skin** (rabbit): Moderately irritating OECD Test Guideline 404  
Acute dermal LD50 (rabbit): > 2,000 mg/kg (literature value)

**Inhalation** No information available.

**Ingestion** Acute oral LD50 (rat): > 2,000 mg/kg OECD Test Guideline 401

### CARCINOGENICITY

Contains no ingredient listed as a carcinogen

---

## SECTION 12 ECOLOGICAL INFORMATION

**Aquatic toxicity** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 1 - 10 mg/l  
(literature value)

EC50 (Daphnia) 48 hours: > 1 - 10 mg/l  
(literature value)

EC50 (Scenedesmus capricornutum (green algae)) 72 hours: > 10 - 100 mg/l (literature value)

**Biodegradation** Readily biodegradable.

---

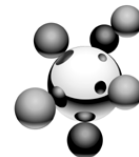
## SECTION 13 DISPOSAL CONSIDERATIONS

**Waste Code** D002 - Corrosivity (RQ 100 LB) Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. This product has the RCRA characteristic of corrosivity.

**Disposal methods** Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

**Empty containers.** Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

---



## P-TERT-BUTYLPHENOL

---

### SECTION 14 TRANSPORT INFORMATION

**DOT** UN 2430, Alkylphenol, solid, n.o.s. (p-tert-butylphenol), 8, III, Marine pollutant  
**IATA** UN 2430, Alkylphenol, solid, n.o.s. (p-tert-butylphenol), 8, III, Marine pollutant  
**IMDG** UN 2430, Alkylphenol, solid, n.o.s. (p-tert-butylphenol), 8, III, Marine pollutant

---

### SECTION 15 REGULATORY INFORMATION

#### U.S. FEDERAL REGULATIONS

##### OSHA Hazards

Irritating to eyes, respiratory system and skin.

##### TSCA Inventory Listing

###### Components

###### CAS-No.

Phenol, 4-(1,1-dimethylethyl)-

98-54-4

##### SARA 302 Status

###### Components

###### CAS-No.

###### Weight percent

Contains no chemicals subject to SARA 302 reporting.

##### SARA 311/312 Classification

"Immediate (acute) health hazard", "Delayed (chronic) health hazard"

##### SARA 313 Chemical

###### Components

###### CAS-No.

###### Weight percent

SARA 313: 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.

##### CERCLA Hazardous Substance

###### Components

###### Reportable Quantity

###### Weight percent

none

#### INTERNATIONAL REGULATIONS

##### Workplace Hazardous Materials Information System (WHMIS) Classification

Class D, Division 2, Subdivision B: Toxic material.

## P-TERT-BUTYLPHENOL

---

### European Union

67/548/EEC

Xi: Irritant

N: Dangerous for the environment

R36/37/38: Irritating to eyes, respiratory system and skin.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Australian Inventory of Chemical Substances (AICS) Listing

Listed

### Japanese Minister of International Trade and Industry (MITI) Inventory Listing

Listed

### Canadian Domestic Substance List (DSL) Inventory Listing

Listed

### Canadian Non-Domestic Substance Listing (NDSL)

Not listed

### European Inventory of Existing Commercial Chemical Substances (EINECS) Listing

Listed

### Philippines Inventory List (PICCS)

Listed

### Korean Inventory List

Listed

### China Inventory List

Listed

## STATE REGULATIONS

### California Prop. 65

#### Components

CAS-No.

none

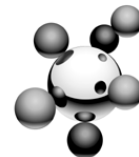
---

## SECTION 16 OTHER INFORMATION

### HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
HMIS	2	1	0
NFPA	2	1	0

---



## P-TERT-BUTYLPHENOL

---

THE DATA AND INFORMATION CONTAINED HEREIN ARE BEING FURNISHED FOR INFORMATIONAL PURPOSES ONLY, UPON THE EXPRESS CONDITION THAT EACH CUSTOMER SHALL MAKE ITS OWN ASSESSMENT OF APPROPRIATE USE AND APPROPRIATE SHIPPING, TRANSFER AND STORAGE MATERIALS AND PROCEDURES FOR SASOL NORTH AMERICA'S PRODUCTS. ALTHOUGH BASED ON INFORMATION SOURCES WHICH SASOL NORTH AMERICA CONSIDERS ACCURATE AND RELIABLE, SASOL NORTH AMERICA MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THE VALIDITY OF THIS INFORMATION, THE INFORMATION SOURCES UPON WHICH THE SAME ARE BASED, OR THE RESULTS TO BE OBTAINED, AND EXPRESSLY DISCLAIMS LIABILITIES FOR DAMAGES OR INJURIES RESULTING FROM THE USE THEREOF.

---