

## 4-tert-Butylbenzoic acid 98-73-7 MSDS

### Section 1 - Chemical Product

MSDS Name:p-tert-Butylbenzoic acid 99+% Material Safety Data Sheet

Synonym:Benzoic acid, p-tert-butyl-; PTBBA; Benzoic acid, 4-(1,1-dimethylethyl)-; p-tert-Butyl benzoic acid

### Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
98-73-7	4-tert-Butylbenzoic acid	99+	202-696-3

Hazard Symbols: XN

Risk Phrases: 22

### Section 3 - HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Harmful if swallowed.The toxicological properties of this material have not been fully investigated.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract.

The toxicological properties of this substance have not been fully investigated. May produce nervous system disturbances.

Inhalation:

May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Harmful if inhaled.

Chronic:

May cause liver and kidney damage. May cause adverse reproductive effects.

### Section 4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

## **Section 5 - FIRE FIGHTING MEASURES**

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media:

Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

## **Section 6 - ACCIDENTAL RELEASE MEASURES**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

Provide ventilation.

## **Section 7 - HANDLING and STORAGE**

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Do not breathe dust, vapor, mist, or gas. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood.

Storage:

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## **Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits CAS# 98-73-7: Netherlands: 2 mg/m<sup>3</sup> MAC (respirable dust) Personal Protective Equipment Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Flakes

Color: light yellow

Odor: None reported.

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 165.00 - 167.00 deg C

Autoignition Temperature: Not applicable.

Flash Point: > 80 deg C (> 176.00 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature:

Solubility in water: Insoluble.

Specific Gravity/Density:

Molecular Formula: C<sub>11</sub>H<sub>14</sub>O<sub>2</sub>

Molecular Weight: 178.23

## **Section 10 - STABILITY AND REACTIVITY**

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, dust generation, excess heat, strong oxidants.

Incompatibilities with Other Materials:

Strong oxidizing agents, strong bases.

Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

## **Section 11 - TOXICOLOGICAL INFORMATION**

RTECS#:

CAS# 98-73-7: DG4708000 LD50/LC50:

CAS# 98-73-7: Draize test, rabbit, eye: 100 mg Mild; Inhalation, rat: LC50 = >1900 mg/m<sup>3</sup>/4H;

Oral, mouse: LD50 = 568 mg/kg; Oral, rat: LD50 = 473 mg/kg; Skin, rabbit: LD50 = >900 mg/kg;

Skin, rat: LD50 = 300 mg/kg.

Carcinogenicity:

4-tert-Butylbenzoic acid - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

## **Section 12 - ECOLOGICAL INFORMATION**

Ecotoxicity:

Fish: Goldfish: LC50 = 33 mg/L; 96 Hr; Unspecified

## **Section 13 - DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations.

## **Section 14 - TRANSPORT INFORMATION**

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

## **Section 15 - REGULATORY INFORMATION**

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 22 Do not breathe dust.

S 24/25 Avoid contact with skin and eyes.

S 28A After contact with skin, wash immediately with plenty of water.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 98-73-7: 1

Canada

CAS# 98-73-7 is listed on Canada's DSL List.

CAS# 98-73-7 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 98-73-7 is listed on the TSCA inventory.

## **SECTION 16 - ADDITIONAL INFORMATION**

N/A