Material Safety Data Sheet
P-Tert-Butylbenzoic Acid

SECTION 1: IDENTIFICATION

Product Name: P-tert-Butylbenzoic acid

CAS Number: 98-73-7

Chemical Formula: C11H14O2

Synonyms: PTBBA; 4-tert-Butylbenzoic acid

Company
Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North
Suite #C
Seattle WA 98109, USA

Business Contact
Customer Service: 206-282-3376
info@silverfernchemical.com

SECTION 2: HAZARD IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Reproductive hazard

Target Organs
Liver injury may occur. Kidney injury may occur.

HMIS Classification

Health Hazard: 3

Chronic Health Hazard: *

flammability: 1

Physical hazards: 0

NFPA Rating
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Health Hazard: 2
Fire: 1
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.

Skin Toxic if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion Toxic if swallowed.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Formula: C11H14O2

Molecular Weight: 178.23 g/mol

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<th>CAS-No.</th>
<th>EC-No.</th>
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<th>Concentration</th>
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<td>98-73-7</td>
<td>202-696-3</td>
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SECTION 4: FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE FIGHTING MEASURES
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Flammable properties
Flash point 158 °C (316 °F) - closed cup
Ignition temperature no data available

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains.

Methods for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Handling
Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
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Handle with gloves.

Eye protection
Safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form flakes
Color white

Safety data
pH no data available
Melting point 162 - 165 °C (324 - 329 °F)
162 - 167 °C (324 - 333 °F)
Boiling point no data available
Flash point 158 °C (316 °F) - closed cup
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Water solubility no data available

SECTION 10: STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
Strong oxidizing agents, Strong bases

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 473 mg/kg
Remarks: Behavioral: Convulsions or effect on seizure threshold. Behavioral: Ataxia. Lungs, Thorax, or
Respiration: Dyspnea.
LC50 Inhalation - rat - 4 h - > 1,900 mg/m3
LD50 Dermal - rabbit - > 900 mg/kg

Irritation and corrosion
Eyes - rabbit - Mild eye irritation

Sensitization
No data available

Chronic exposure
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or
confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or
potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated
carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or
potential carcinogen by OSHA.
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).
Reproductive toxicity - rat - Inhalation
Paternal Effects: Testes, epididymis, sperm duct.
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Signs and Symptoms of Exposure
Liver injury may occur. Kidney injury may occur. To the best of our knowledge, the chemical, physical, and toxicological
properties have not been thoroughly investigated.

Potential Health Effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.

Skin Toxic if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion Toxic if swallowed.
Target Organs Liver injury may occur., Kidney injury may occur.,

Additional Information
RTECS: DG4708000

SECTION 12: ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
No data available

Ecotoxicity effects
Toxicity to fish LC50 - Carassius auratus (goldfish) - 4 mg/l - 96 h

Further information on ecology
No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

DOT (US)
UN Number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solids, organic, n.o.s. (4-tert-Butylbenzoic acid)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (4-tert-Butylbenzoic acid)
Marine pollutant: No

IATA
UN-Number: 2811 Class: 6.1 Packing group: III
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Proper shipping name: Toxic solid, organic n.o.s. (4-tert-Butylbenzoic acid)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Reproductive hazard

DSL Status
All components of this product are on the Canadian DSL list.

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

SARA 313 Components
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.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

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

Pennsylvania Right To Know Components
4-tert-Butylbenzoic acid
CAS-No. 98-73-7
Revision Date

New Jersey Right To Know Components
4-tert-Butylbenzoic acid
CAS-No. 98-73-7
Revision Date

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: OTHER INFORMATION

DISCLAIMER OF RESPONSIBILITY
Material Safety Data Sheet

P-Tert-Butylbenzoic Acid

The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.