



**MATERIAL
SAFETY DATA
SHEET**

P-O PRESERVATIVE

DATE: 08/22/2006

CAS NO: 90-43-7

SUPERSEDES: 07/01/2002

1. **CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: P-O PRESERVATIVE
SYNONYMS: Ortho phenyl phenol, ortho hydroxy biphenyl, 2-phenyl phenol
CHEMICAL FAMILY: Phenol
MOLECULAR FORMULA: C₁₂H₁₀O
MOLECULAR WEIGHT: 170

VERICHEM, 3499 Grand Avenue, Pittsburgh, PA 15225 (412-331-7299, 8:30 am to 5:00 pm)
EMERGENCY PHONE: For any emergency involving spill, leak, fire, exposure, or accident call
CHEMTREC: 1-800-424-9300. Outside the USA and Canada call: 703-527-3887.

2. **COMPOSITION/INFORMATION ON INGREDIENTS** **REGULATED COMPONENTS**

COMPONENT	CAS NUMBER	PERCENT	WORKER EXPOSURE	REFERENCE
O-phenylphenol	90-43-7	99.9%	None Established	

3. **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: White flakes with phenolic odor.

EFFECTS OF OVEREXPOSURE: May cause skin and respiratory irritation. Causes eye burns.
Harmful if swallowed.

4. **FIRST AID MEASURES (IN CASE OF CONTACT)**

IF IN EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Get medical attention. Remove contact lenses, if present, after the first 5 minute, then continue rinsing eye. Call a poison control center or doctor for treatment advice. **IF ON SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. **IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. **IF INHALED:** Move person to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. **FIRE FIGHTING MEASURES**

FLAMMABLE PROPERTIES

FLASH POINT: 280°F/138°C.
FLAMMABLE LIMITS (% BY VOLUME): Lower explosive limit 1.4%
Upper explosive limit 9.5%

AUTOIGNITION TEMPERATURE: 968°F/ >520°C.

DECOMPOSITION TEMPERATURE:

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTION

In case of fire use water spray, alcohol foam, carbon dioxide, or dry chemicals. Exercise caution when fighting fires involving chemical substances. Respiratory protection is required. Burning will produce toxic fumes. Containers exposed to heat will result in pressure increase in containers. Cool hot containers with cool water.

6. **ACCIDENTAL RELEASE MEASURES**
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Immediately dike material to keep away from water sources. Absorb with vermiculite or other suitable absorbent. Discard in accordance with Federal, State, and local regulations. Residual amounts left on surface may be cleaned with soap and water. Rinse residuals to municipal treatment plant.

7. **HANDLING AND STORAGE**

EXPOSURE GUIDELINE(S): Avoid breathing dirt. Avoid contact with eyes and skin. Wash thoroughly after handling. Reseal containers after use. **VENTILATION:** General recommended.
SHELF LIFE: Greater 2 years.

8. **PERSONAL PROTECTION**

EYE PROTECTION REQUIREMENTS: Chemical goggles or face shield. **SKIN PROTECTION REQUIREMENTS:** Rubber gloves with long sleeved shirt to minimize contact. **VENTILATION REQUIREMENTS:** Use local and general exhaust ventilation to control levels of exposure. **RESPIRATOR REQUIREMENTS:** An air-purifying particulate/organic vapor cartridge respirator is required any time inhalation of dust or vapor is possible Observe OSHA regulations for respirator use (29 CFR 1910.134).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR: White flakes.
BOILING POINT: 547°F/286°C.
MELTING POINT: 134°F/56-58°C.
VAPOR PRESSURE: 0.0007 @ 68°F/20°C; 1.0 @ 212°F/100°C.
SPECIFIC GRAVITY: 1.26 at 68°F/20°C.
VAPOR DENSITY: Unknown.
PERCENT VOLATILE (BY WEIGHT): Negative.
pH: 6.1 of a saturated solution.
SATURATION IN AIR (PERCENT BY VOLUME): Unknown.
EVAPORATION RATE: Unknown.
SOLUBILITY IN WATER: 2,000 mg/l @ 68°F/20°C.

10. **STABILITY AND REACTIVITY**

STABILITY (CONDITIONS TO AVOID): None known.
POLYMERIZATION (CONDITIONS TO AVOID): Will not occur.
INCOMPATIBLE MATERIALS: Strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce CO, CO₂.

11. **TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS

EYE: Severely irritating and corrosive to eyes (Rabbits).
SKIN CONTACT: Strong dermal irritant following 4-hour applications (Rabbits).
SKIN ABSORPTION: LD₅₀ >2000 mg/kg (Rat).
INGESTION: LD₅₀ >2980 mg/kg (Rat).
INHALATION: LD₅₀ 1-hour LD₅₀ >949 mg/m³ (Rats).
SENSITIZATION: No dermal sensitization potential (Guinea Pigs).
OTHER: Fifteen dermal applications of ortho-phenylphenol administered to rats at dose levels of 500 or 1,000 mg/kg body weight resulted in slight local irritation of the skin. The no-observed-effect-level (NOEL) for systemic toxicity in this study was greater than or equal to 1,000 mg/kg body weight.

SUBCHRONIC / CHRONIC EFFECTS

TOXICITY – Kidney and urinary bladder lesions were detected in male rats only when OPP was presented in feed at exceedingly high concentrations resulting in increased mortalities.

11. **TOXICOLOGICAL INFORMATION** Cont.

CARCINOGENICITY – Male rats fed a diet containing exceedingly high concentrations of OPP, which resulted in decreased survivability, had bladder tumors. In a two year dietary study in mice, there was an increased incidence of liver tumors in male mice at 500 and 1,000 mg/kg/day and no significant increase in tumors in female mice. Although it was not established, a likely NOEL for this study would be 100 mg/kg/day. In a two year combined chronic toxicity/oncogenicity study, rats were fed dietary concentrations of 0, 800, 4,000, or 8,000/10,000 (males/females) ppm of ortho-phenylphenol. A systemic chronic toxicity NOEL of 39 mg active ingredient/kg body weight/day was established. Evidence of urinary bladder tumors was seen at 4,000 and 8,000 ppm in the male rats. No evidence of a compound-induced neoplasia was observed in the female rats at any dose tested.

GENOTOXIC EFFECTS

MUTAGENICITY – In vitro mutagenicity studies were predominantly negative; a few showed positive mutagenic effects. However, the in vitro studies did not demonstrate any mutagenic potential. Results were negative in the Salmonella/Mammalian-Microsome Plate Incorporation Mutagenicity Assay (Ames Test). In the mouse lymphoma mutagenesis assay there was a negative response in the absence and a positive response in the presence of exogenous metabolic activation.

REPRODUCTIVE EFFECTS

Ortho-Phenylphenol (OPP) was administered in the diet of rats for two generations to test for potential reproductive and neonatal effects. OPP was given at doses of 0, 10, 20, 100, and 500 mg/kg/day. The reproductive NOEL for OPP was 500 mg/kg/day. The parental and neonatal toxicity NOEL was 100 mg/kg/day based on the following effects observed in the 500 mg/kg/day dose group: 1. A decrease in body weight for males and females. 2. Morphologic lesions in the kidneys, urinary bladder, and ureter of males. 3. A possible compound-related death in the high dose group males. 4. A decrease in pup body weights.

12. **ECOLOGICAL INFORMATION**

AQUATIC: LC₅₀ - 20 mg/l (Leuciscus idus) 96 hour exposure.

13. **DISPOSAL CONSIDERATION**

ACTION TO TAKE IN THE EVENT OF A SPILL:

DISPOSAL METHOD: Follow container label instructions for disposal of wastes generated during use in compliance with the FIFRA product label. In other situations, bury in an EPA approved landfill or burn in an incinerator approved for pesticide destruction. Do not reuse container.

14. **TRANSPORT INFORMATION**

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	D.O.T. Shipping Information	IMO Shipping Information	ICAO/IATA	TRANSPORT CANADA
Shipping Name	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Hazard Class	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Packing Group	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Subsidiary Class	Not Regulated	Not Regulated	Not Regulated	Not Regulated
UN/ID Number	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Transport Label Required	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Packing Instructions Passenger Cargo	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Max. Net Quantity Passenger Cargo	Not Regulated	Not Regulated	Not Regulated	Not Regulated
D.O.T. Hazardous Substances	Not Regulated	Not Regulated	Not Regulated	Not Regulated
IMDG Page	Not Regulated	Not Regulated	Not Regulated	Not Regulated

15. REGULATORY INFORMATION

INVENTORY INFORMATION

US TSCA: Exempt.
CANADA DSL: Unknown.
EEC EINECS: Unknown.

OTHER ENVIRONMENTAL INFORMATION

The following components are defined as toxic chemicals subject to reporting requirements of Section 313 of Title III and of 40 CFE 372 or subject to other EPA regulations.

COMPONENT:

CAS. NUMBER:

PERCENT:

TPQ (Pounds): Not applicable.

RQ (Pounds): Not applicable.

RCRA: Not applicable.

RSCA 12B: Not applicable.

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA

ACUTE: (Y)

CHRONIC: (Y)

FIRE: (N)

REACTIVE: (N)

PRESSURE: (N)

16. OTHER INFORMATION

NFPA HAZARD RATING (NATIONAL FIRE PROTECTION ASSOCIATION)

FIRE: 1

HEALTH: 3

REACTIVITY: 1

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