

Material Safety Data Sheet

SECTION I CHEMICAL and COMPANY IDENTIFICATION

PRODUCT: *TCP*
CHEMICAL NAME: *Tricresyl Phosphate (mixed isomers)*
COMMON/GENERIC NAME: Lindol TCP
CHEMICAL FAMILY: Alkyl Phosphate
MANUFACTURER: Supresta, 420 Saw Mill River Road, Ardsly, NY and Others in China. - Customer Service 330-920-8023
EMERGENCY NUMBERS: *CHEMTREC 800-424-9300*
CANUTEC(Canada) 613-996-6666

SECTION II COMPOSITION / INGREDIENT INFORMATION

	<u>CAS #</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
COMPOSITION: Tricresyl Phosphate (mixed isomers) (60-95%)	1330-78-5	ND	ND
Tri-ortho-cresyl phosphate: <1.0%	78-30-8		
Trixylyl Phosphate (5 -40%)	25155-23-1		

SECTION III/IV HAZARDS / FIRST AID PROCEDURES

EMERGENCY OVERVIEW: A clear colorless, oily liquid, which may become irritating to eyes, skin, and mucous membranes. Ingestion and prolonged contact should be avoided.

EYE: Flush eyes with water for 15 min. Hold eyelids apart to ensure rinsing of the entire surface of the eye. Call a physician if irritation develops.

SKIN: Remove contaminated clothing and equipment. Wash skin with soap and water. If in contact with hot product, treat as a burn.

INGESTION: Do not induce vomiting. Never give anything by mouth to unconscious person. Seek medical attention immediately.

INHALATION: Inhalation of vapors, mists, or aerosols may cause respiratory tract irritation. This product may cause neurotoxicity and cholinesterase inhibition. Remove to fresh air; give artificial respiration or oxygen if necessary.

TOXICITY: Practically non-toxic by ingestion. LD50 (rat) >4650 mg/kg

CARCINOGENICITY: Not listed by NTP, IARC or OSHA

NOTE TO PHYSICIAN: Over exposure to this product by ingestion or inhalation may cause peripheral neuropathy and cholinesterase inhibition. Symptoms of peripheral neuropathy may include: diarrhea, conjunctivitis, laryngitis, thinitis, pharyngitis, distal extremity paresthesias, and cramping pain in the calves. Later symptoms may include: flaccid paralysis followed by spasticity of the lower extremities resulting in a spastic gait. Symptoms of cholinesterase inhibition may include: headache, nausea, sweating, numbness and tingling of the hands and feet, salivation, muscle twitching, tremors, incoordination, blurred vision, tears, abdominal cramps, diarrhea, and chest discomfort. In cases of cholinesterase inhibition, atropine is antidotal. Pralidoxime chloride (2-PAM; Protopam chloride) is also antidotal when administered early and in conjunction with atropine.

IN ALL CASES OF EMERGENCY, CONTACT A PHYSICIAN

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SECTION V FIRE AND EXPLOSION INFORMATION

FLASH POINT 240 C COC

FIRE-FIGHTING PROCEDURES: Use Chemical foam, CO₂, Dry Chemical, water fog. This product is not defined as flammable or combustible. It is self-extinguishing once the source of ignition is removed.

HAZARDOUS COMBUSTION PRODUCTS: This product will decompose under extreme temperatures forming oxides of carbon, oxides of phosphorus, and phosphoric acid.

PROTECTIVE EQUIPMENT: Firefighters should wear full face self-contained breathing apparatus.

SECTION VI SPILLS AND ENVIRONMENTAL INFORMATION

SPILL OR LEAK PRECAUTIONS: Wear appropriate protective clothing, gloves and equipment. Contain spill with inert absorbent or earth. Transfer to secure containers and dispose of according to local and state regulations. Thought should always be given to collecting the material in such a manner that it could be recycled.

Clean/scrub affected area with detergent. Prevent run-off into sewers or natural waterways. Spills in excess of the RQ must be reported to the local emergency response organizations. Major spills should also be reported to the National Response Center. Spills with potential to contaminate coastal waterways must be reported to the U.S. Coast Guard (800-424-8802)

WASTE DISPOSAL: All containers should be effectively labeled to facilitate the appropriate disposal or reclaim.

SECTION VII HANDLING AND STORAGE

Store in sealed containers in dry, ambient temperature conditions

SECTION VIII EXPOSURE CONTROLS AND PERSONAL PROTECTION

VENTILATION: Use only where sufficient ventilation exists to keep exposure levels of fumes and dust below recommended levels.

RESPIRATORY AND PERSONAL PROTECTION: Respirators should be selected when TWA exceeded. Avoid hot vapors when mixing or packaging. Chemical safety goggles or full face shield; gloves, boots and apron as appropriate.

FACILITIES: There should be a shower facility and eyewash in the building where this product is being stored and handled. Exercise good chemical handling practice.

SECTION IX PHYSICAL AND CHEMICAL INFORMATION

Appearance: Clear / amber colorless liquid
Specific Gravity @25°C = 1.15
Vapor Pressure: 0.
Viscosity, mPa (20°C) = 12

Evaporation Rate: < 1 (butyl acetate=1)
Boiling Point: 260°C (500°F) @ 10mm Hg
Refractive Index 25°C: Not Determined
Solubility in Water: <0.2%

SECTION X STABILITY AND REACTIVITY

Under normal storage conditions, this product a) is stable; b) will not polymerize or exotherm. It not sensitive to static discharge.

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Cuyahoga Falls, Ohio 44223

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Fax 330-920-0971

SECTION XI TOXICOLOGICAL INFORMATION

INHALATION: Not Determined. Because of its low vapor pressure, significant amounts of airborne vapors are not expected at normal room temperatures. However, use at elevated temperatures may generate vapors or aerosols which are irritating to the respiratory tract.

INHALATION CHRONIC EXPOSURE: Chronic inhalation exposure effects for this product are not known; however, repeated inhalation of vapors or mists may cause toxicity to the peripheral nervous system.

DERMAL: Practically non-toxic. The product is a mild to moderate irritant to rabbit skin following a 24-hour exposure. The product is not a sensitizing agent based on tests on albino guinea pigs.

LD50 : >4640 mg/kg (rabbit)

EYE: This product was a slight eye irritant when tested on rabbits.

INGESTION: **substantial ingestion may result in cholinesterase inhibition.**

CARCINOGENICITY/MUTAGENICITY: In two year feeding studies in rats and mice, tricresyl phosphate showed no evidence of carcinogenic activity. The NOELs (no observable effect levels) in rats and mice were 300ppm and 250 ppm. Respectively.

No mutagenic activity was found in several tests.

NEUROTOXICITY: There were no clinical or histopathological signs of neurotoxicity in hens exposed to this material at oral doses of 10, 20 or 60 mg/kg/day for 5 days per week for 6 weeks. A single dose of 2000 mg/kg of Tricresyl phosphate to hens resulted in no effects in neurotoxic esterase activity and no clinical signs of neurotoxicity. Five consecutive daily oral doses of 2000 mg/kg of this product to hens resulted in a slight decrease in neurotoxic esterase activity but no clinical signs of neurotoxicity. In a recently conducted neurotoxicity test, this product did not express neurotoxic activity.

Reproductive effects: The ortho isomer of TCP has been shown to cause reproductive toxicity in male rats. A metabolite of TOCP (tri ortho-cresyl phosphate) apparently causes a reversible adverse effect on spermatogenesis, which results in decreased male fertility. The meta and para isomers of TCP do not adversely affect the male reproductive system.

A study was conducted in which trixylenyl phosphate was administered to both male and female rats daily for about 25 days after which the treated animals were mated to nontreated counterparts. In this study, trixylenyl phosphate caused a decrease in the number of pregnancies. Microscopic examination of the reproductive organs found treatment-related degenerative changes to the male organs. But no changes to the female reproductive organs. In the recovery group included in the study, four weeks after discontinuation of daily treatment, the animals fully recovered and were 100% successful in achieving pregnancy. Thus the antifertility effect observed in male rats was fully reversible shortly after exposure ceases.

SECTION XII ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No information available.

SECTION XIII DISPOSAL CONSIDERATIONS

Incineration by a permitted hazardous waste facility in accordance with all regulatory requirements is the preferred method of disposal. Empty containers can be rinsed with a suitable solvent/surfactant and steamed to remove residual product and fumes before disposal or reuse in accordance with applicable regulations. For spill clean-up procedures see Sect.VI.

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SECTION XIV

TRANSPORTATION INFORMATION

DOT: Hazard Class 9 UN 3082 packaging group III.

Proper shipping name: Environmentally Hazardous substance, liquid, N.O.S.(Tricresyl Phosphate / <1% ortho isomer), Trixylenyl phosphate).

Remarks: Not regulated for surface transport in non-bulk (,119 gallons) packagings. This product contains tricresyl phosphate (less than 1% ortho isomer) and trixylenyl phosphate which are marine pollutants per 49 CFR 172.101, Apprndix B

CANADA TRANASPORT HAZ.GOODS: See DOT.

AIR (IATA/ICAO): See DOT

EUROPEAN TRANSPORTATION: ADR/RID HAZ. CLASS:

US CUSTOMS: - HARMONIZED TARIFF CODE: 2919.00.50.10

SECTION XV

REGULATORY INFORMATION

OSHA:

SARA TITLE III: - 311/312 CATEGORIES: Not listed.

“ “ - 313 Reportable ingredients: None

CERCLA RQ: This product does not contain a hazardous substance regulated under section 304 for emergency release.

RCRA Status:

TSCA REGULATORY: All intentional ingredients are listed in the TSCA Inventory.

CANADA WHMIS HAZARD SYMBOL AND CLASS: Not Regulated

CANADA INGREDIENT DISCLOSURE LIST: Does not contain any ingredients on the IDL. All intentional ingredients are on the DSL.

SECTION XVI OTHER INFORMATION

HMIS Label: Health: 1
Fire: 1
Reactivity: 0
Protection: C

Prepared: Jan. 22, 2009

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other or additional considerations.

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