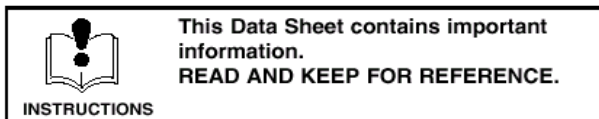


Material Safety Data Sheet



MSD050

Rev. B
Updated: 12/09



This Data Sheet contains important information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

Website: www.graco.com
Search under "literature"

Section 1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: TSL - TCP

Manufacturer / Supplier

Graco Inc.

P.O. Box 1441

88-11th Ave. NE

Minneapolis, MN 55413

Part Number(s): 288166 (1 quart)

Emergency Information

Health Emergency (RMPC): (303)– 623–5716

Chemical Spills (Chemtrec): (800)– 424–9300

e-mail: customerservice@graco.com

SECTION 2 HAZARDS IDENTIFICATION

Adverse human health effects May cause irritation of the respiratory tract
May cause cholinesterase inhibition
May cause reproductive effects based on animal data

NFPA Ratings (Scale 0-4) Health=1, Fire=1, Reactivity=0

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	Weight %	Annex No.	-EEC No.	EU Classification	Notes
Tricresyl phosphate (mixed isomers) 1330-78-5	>96.7		215-548-8	Xn: R21/22 N; R51-53	
Tri-ortho-cresyl phosphate 78-30-8	0.001-0.03	#015-015-00-8	201-103-5	T; R39/23/24/25 N;51/53	
Trixylyl phosphate 25155-23-1	<3		246-677-8	Xn; R62	

SECTION 4 FIRST AID MEASURES

EYE CONTACT: Flush eyes with large amounts of water for two to three minutes. Remove any contact lenses and continue flushing for fifteen minutes. If irritation persists, get medical attention.

SKIN CONTACT: Flush exposed areas with plenty of soap and water. Remove contaminated clothing, including shoes, and launder before reuse.

INGESTION: Do NOT induce vomiting. If victim is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. Do not attempt to give anything by mouth to an unconscious person.

INHALATION: Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. If cough or other symptoms develop, seek medical attention.

SECTION 5 FIRE FIGHTING MEASURES

NFPA CODES: HEALTH – 1
FLAMMABILITY – 1
REACTIVITY – 0
SPECIAL – Not applicable.

FLASHPOINT: 240.55°C (DIN/EN 22719;ISO2719)

FLAMMABLE LIMITS: Not determined.

GENERAL HAZARD: Evacuate personnel upwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke.

EXTINGUISHING MEDIA: Chemical type foam, carbon dioxide, dry chemical, water fog.

HAZARDOUS COMBUSTION PRODUCTS: Fumes, smoke, carbon dioxide, carbon monoxide (toxic), oxides of carbon and phosphorus.

FIRE FIGHTING PROCEDURES: Use water spray to cool fire exposed surfaces and to protect personnel. Shut off 'fuel' to fire. Use fire extinguishing materials listed above to extinguish fire.

SPECIAL PRECAUTIONS: Avoid spraying water directly into large containers due to danger of boil over.

FIRE FIGHTING EQUIPMENT: Respiratory and eye protection are required for fire fighting personnel. Full protective equipment (Bunker Gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA may not be required.

STATIC DISCHARGE SENSITIVITY: Not determined.

IMPACT SENSITIVITY: Material is not impact sensitive.

NOTE: For small containers of material, it should be considered if there will be less damage by allowing the material to burn to exhaustion rather than fighting the fire and risk causing environmental contamination and other problems.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land): Immediately turn off or isolate any source of ignition (pilots, electrical equipment, flames, heaters, etc). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities.

Spill control procedures (water): Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard). This product is listed as a marine pollutant.

Waste disposal method: Most oil based products are incinerated, land-filled or reclaimed. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.

Other: CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

HANDLING: Keep containers closed when not in use. Do not transfer to unmarked containers. Fire extinguishers should be kept readily available. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes.

STORAGE: Store in a dry, cool, well-ventilated area away from incompatible materials. Maximum recommended storage temperature of 65 °C (149°F). Store above 4.4 °C (40 °F) for improved pumping rates. Temperatures between 27-37.8 °C (80-100 °F) provide good flow rates.

ADDITIONAL INFORMATION: No additional information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS FOR COMPONENTS:

Components	ACGIH-TLV Data	OSHA (PEL) Data
Tricresyl phosphate (mixed isomer) 1330-78-5	Not Determined	Not Determined
Tri-ortho-cresyl-phosphate 78-30-8	Not Determined	Not Determined
Trixylyl Phosphate 25155-23-1	Not Determined	Not Determined

Ventilation requirements: Adequate ventilation is recommended to control potential employee exposure.

Personal protective equipment:

- Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment.
- Hand protection Neoprene gloves
- Eye protection Chemical safety goggles

-Skin and body protection Body covering clothes and boots

Hygiene measures Safety shower and eye bath should be provided. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid.

ODOR: Slight

APPEARANCE: Clear, colourless to slightly brownish liquid.

VAPOR PRESSURE: 0.1 mmHg (155°C)

BOILING POINT/RANGE: 260°C (500°F) @ 10 mmHg

MELTING POINT/RANGE: Not determined

SOLUBILITY IN WATER: 0.2 g/100ml @ 25°C

SOLUBILITY IN OTHER SOLVENTS: Soluble in common solvents

RELATIVE DENSITY: 1.162 g/mL (25°C)

VISCOSITY: 34 cP (37.8°C)

MOLECULAR WEIGHT: Not determined.

POUR POINT: -25°C (-13°F)

FLASH POINT: 240.55 °C (465°F) (open cup)

FLAMMABLE/EXPLOSION LIMITS: Not explosive/not flammable

AUTO-IGNITION TEMPERATURE: Not self-ignitable

SECTION 10 STABILITY AND REACTIVITY

STABLE: Stable under normal conditions

HAZARDOUS POLYMERIZATION: Not expected to occur.

CONDITIONS TO AVOID: Prolonged storage at elevated temperatures.

MATERIALS TO AVOID: Strong oxidizing agents, strong acids and strong alkalis. It hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide and carbon monoxides. Phosphorus oxides.

SECTION 11 TOXICOLOGICAL INFORMATION

Note: Toxicological data have not been determined specifically for this product. Information given is based on data on the components and the toxicology of similar products.

Acute toxicity:

-Rat oral LD50 >4640 mg/kg

-Rabbit dermal LD50 >4640 mg/kg

-Eye irritation (rabbit) Not irritant

-Dermal irritation (rabbit) Not irritant

Dermal sensitization Not a sensitizer

Sub-chronic toxicity : Rats that received daily oral doses of 200 mg/kg/day or 1000 mg/kg/day of trixylenyl phosphate for three or more weeks showed a reduction in plasma cholinesterase activity. Neurotoxicity test conducted during this subchronic toxicity study, including a functional observation battery and motor activity assessment did not show any signs of neurotoxicity.

Effects of overexposure:

-Ocular May cause mild irritation to the eyes

-Dermal May cause mild irritation to the skin

-Sensitization No sensitizing effects known

-Ingestion May cause neurotoxicity

Chronic toxicity 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 300 ppm and 250 ppm, respectively.

Mutagenicity	Not mutagenic in several in vitro assays.
Carcinogenicity	Not included in NTP 11 th Report on Carcinogens Not classified by IARC
Reproductive toxicity	In reproductive toxicity test, male and female rats received daily Oral doses of trixylenyl phosphate for two weeks after which they were mated. Although mating was successful, there was a treatment-related decrease in the pregnancies in the mid and high dose animals. While there were no pregnancies in the high dose animals, when the previously treated animals were maintained without treatment for four weeks and then mated, all the females became pregnant. This anti-fertility effect is fully reversible. The ortho isomer of TCP (tricresyl phosphate) 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.
Neurotoxicity	Trixylenyl phosphate can cause acute delayed neurotoxicity when administered orally to hens at >1000mg/kg. A single oral 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.

SECTION 12 ECOLOGICAL INFORMATION

Information on ecological effects Tricresyl phosphate is classified by IMO and DOT as a Marine Pollutant

Germany, water endangering Classes (WGK) 2

SECTION 13 DISPOSAL CONSIDERATIONS

The following information only applies to the product as supplied and are general recommendations. Combination with other materials may alter how the product can be disposed of. If in doubt, contact the local authorities regarding proper disposal methods.

DISPOSAL METHOD: This product is considered an oil. Product is not suitable for disposal by landfill, sewers, drains, or natural streams and rivers. Product will produce ash if burned, and may be incinerated at approved incineration sites. If material has been mixed with gasoline, dispose of the material as waste gasoline. Always dispose of product at supervised incineration or other appropriate waste disposal sites according to current applicable laws and regulations.

EMPTY CONTAINERS: Empty drums should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with EC, national and local regulations.

Plastic containers should be locally recycled after being drained of contents.

SECTION 14 TRANSPORT INFORMATION

UN No. 3082

IMO Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tricresyl phosphate (mixed isomers), trixylyl phosphate)
Class: 9-Miscellaneous Dangerous Substances and articles
Label: 9
Packing Group: III
Marking: MARINE POLLUTANT

ADR/RID Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tricresyl phosphate (mixed isomers), trixylyl phosphate)
 Class: 9-Miscellaneous Dangerous Substances and articles
 Danger Label Model No.: 9
 Hazard identification No. 90
 Classification Code: M6
 Marking: Environmentally hazardous substance

ICAO/IATA Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tricresyl phosphate (mixed isomers), trixylyl phosphate)
 Class: 9
 Hazard label(s): Miscellaneous
 Packing group: III
 Marking: Environmentally hazardous material

DOT Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (Tricresyl phosphate(mixed isomers), trixylyl phosphate)
 Class: 9-Miscellaneous Hazardous Material
 Label: 9
 Packing Group: III

Not regulated for surface and air transport in no-bulk (<119 gallons) packagings. (contains tricresyl phosphate (mixed isomer) and trixylenly phosphate which are Marine Pollutants per 49CFR 172.101 Appendix B)

SECTION 15 REGULATORY INFORMATION

EU Reported in EINECS
-indication of danger Xn-harmful
 N-Dangerous for the environment
-R Phrases R21/22: Harmful in contact with skin and if swallowed
 R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
-S Phrases S28-After contact with skin, wash immediately with plenty of water
 S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

USA Reported in the EPA TSCA Inventory
Australia Listed in AICS
Canada Listed in DSL
China Inventory Listed
Japan Listed in ENCS
Korea Listed in ECL
New Zealand Inventory Listed in NZIoC
Philippines Listed in PICCS

SECTION 16 OTHER INFORMATION

No other information

Prepared By	Graco, Inc.
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This Material Safety Data Sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we have received from sources outside our company. We believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this Data Sheet may not be adequate for all individuals and/or situations. It is the users' obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

NOTES: NA = Not Applicable; NE = Not Established; UN = Unavailable

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

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