



SECTION 1 – PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: MERROL® 521

Chemical Name: Isopropylated triphenyl phosphate

Recommended Use and Restrictions on Use: Flame retardant plasticizer

Manufactured for and supplied by:

Supplier: Harwick Standard Distribution Corporation

Supplier Address: 60 S. Seiberling Street, Akron, OH 44305

Contact: Health, Safety & Environment

Telephone: 330-798-9300

Website: www.harwickstandard.com

SECTION 2 – HAZARD(S) IDENTIFICATION

Classification of the Substance or Mixture:

Reproductive toxicity (Category 2)

Specific target organ toxicity (STOT)-Repeated exposure, (Category 2)

Chronic aquatic toxicity (Category 2)

GHS Label Elements:



Signal Word: Warning

Hazard Statements:

Suspected of damaging fertility. Suspected of damaging the unborn child.

May cause damage to ovary/oviduct, adrenal gland, liver, epididymides through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Do not handle until all safety precautions have been read and understood.

Do not breathe fume/gas/mist/vapors/spray.

Avoid release to the environment.

Collect spillage.

Wear protective gloves/protective clothing/eye protection/face protection.



IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with national and international regulations.

HMIS Ratings: HEALTH 1*, FLAMMABILITY 1, PHYSICAL HAZARD 0

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>Chemical Identity</u>	<u>CAS Number</u>	<u>Weight%</u>
	Propylated triphenyl phosphate	68937-41-7	81-87
	Triphenyl phosphate	115-86-6	13-19

SECTION 4 – FIRST AID MEASURES

Skin Contact: Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if irritation occurs.

Eye contact: Holding the eyelids apart, flush eyes with plenty of flowing water. Get medical attention immediately.

Inhalation: In case of mist inhalation, remove person to fresh air. Keep quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion: If swallowed, wash mouth thoroughly with plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Most important symptoms and effects, acute or delayed:

Suspected of damaging fertility or the unborn child.

May cause damage to ovary/oviduct, adrenal gland, liver, epididymides through prolonged or repeated exposure.

Notes to the Physician: Treat symptomatically and supportively.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Material is not combustible. Use extinguishing method appropriate to surrounding fire conditions. Use water fog or spray, dry chemical, foam or carbon dioxide (CO₂).

Fire-Fighting Equipment/Procedures: Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA). Contain runoff to prevent entry into water or drainage systems.

Unusual Fire and Explosion Hazards: When heated to decomposition, may release poisonous and corrosive fumes of carbon dioxide, carbon monoxide and phosphorus oxides.



SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate safety clothing and eye/face protection. (See Section 8)

Environmental Precautions: Prevent product from entering drains, ditches and rivers.

Leak & Spill Procedure-Methods for Cleaning Up: Soak up with sand or other suitable absorbent and dispose of as solid waste. Collect in suitable and properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

SECTION 7 - HANDLING AND STORAGE

Handling: Keep containers tightly closed. Avoid bodily contact.

Storage: Store in a dry, cool, well-ventilated area away from incompatible materials.
Maximum recommended storage temperature of 65°C (149°F).
Crystallizes at temperatures below 4.4°C (40°F).

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Component	Exposure Limits
Propylated triphenyl phosphate CAS No. 68937-41-7	ACGIH TLV Data Not determined OSHA PEL Data Not determined
Triphenyl phosphate CAS No. 115-86-6	ACGIH TLV Data 3mg/m ³ OSHA PEL Data 3mg/m ³

Engineering/Ventilation Controls: Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

Personal Protection:

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Hands: Neoprene gloves.

Eyes: Chemical safety goggles.

Skin: Body covering clothes and boots.

Hygiene Measures: Safety shower and eye wash station. Do not eat, smoke or drink where materials is handled, process or stored. Wash hands carefully before eating or smoking.



SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Clear colorless liquid
Odor:	None
Boiling Point/Range:	410°C (770°F)
Melting Point/Range:	<-20°C
Flash Point (°C):	>225°C (>437°F) [Open cup]
Flammable/Explosion Limits:	Not flammable/Not explosive
Auto-ignition Temperature:	Not self-ignitable
Vapor Pressure:	2.74x10 ⁽⁻⁴⁾ Pa (20°C)
Viscosity:	96.3 mPa*sec (dynamic) (20°C)
Solubility:	Solubility in water-Hydrolyses 0.330-0.367mg/l at 20°C
Density:	1.168 (20°C)
Partition Coefficient: (n-octanol/water)	Low Pow = 4.92-5.17
Explosive Properties:	There are no chemical groups associated with explosive properties present in the molecule.
Oxidizing Properties:	The structure indicates non oxidizing properties.

SECTION 10 - STABILITY & REACTIVITY

Chemical Stability:	Stable under normal conditions.
Materials to Avoid:	Strong oxidizers, strong acids and strong alkalis. This product hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions.
Conditions to Avoid:	Exposure to moisture.
Hazardous Decomposition Products:	Phosphorus oxides, carbon dioxide and carbon monoxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

-Rat oral LD50:	>2000 mg/kg
-Rabbit dermal LD50:	>2000 mg/kg
-Rat inhalation LC50	200 mg/m ³ air
-Eye irritation (rabbit):	Not irritant
-Dermal irritation (rabbit):	Mild irritant

Specific target organ toxicity (STOT)-Repeated exposure:

At dose levels of 25mg/kg/day and above, parental toxicity was evidenced by increased ovary/oviduct, adrenal gland (males and females) and liver (males only) weights and decreased epididymal weights.



Chronic Toxicity: No data available

Mutagenicity:

Test on mammalian cell cultures with and without metabolic activation did not show mutagenic effects. Weak mutagenic activity in cell forward mutagen assay in mouse lymphoma with metabolic activation. Not mutagenic by the Ames Test.

Carcinogenicity: Not classified by IARC
Not classified as a carcinogen by USA OSHA
Not included in NTP 13th Report on Carcinogens

Reproductive Toxicity: In a reproductive study, rats received daily oral doses of 25, 100 or 400 mg/kg/day for two weeks. The animals were mated and their reproductive organs were microscopically examined. Decreased fertility was observed in the mid and high dose animals. Adverse effects on the reproductive organs were observed at all dose levels. The results of this study indicate that isopropylated triphenylphosphate is a reproductive toxin.

Neurotoxicity: Neurotoxicity only takes place at high dose levels. No classification assigned.

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic Toxicity:

-96 Hour-LC50, Fish:	0.36 mg/l (Rainbow Trout)
	>1.3 mg/l (Sheepshead minnow)
-LC50, Crustacea:	>1 mg/l (Mysid shrimp)
-48 Hour-LC50, Daphnia magna:	1.0 mg/l

Persistence and Degradability: This material hydrolyzes in water.

Bioaccumulative Potential: Not expected to bioaccumulate (QSAR)

Note: Not considered to be PBT or vPvB

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Observe all federal, state and local environmental regulations when disposing of this material.

Disposal of Packaging: Dispose of in a safe manner in accordance with local and national regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (TRIPHENYL PHOSPHATES, TRIARYL PHOSPHATES, ISOPROPYLATED), 9, III



Not regulated for surface transport in non-bulk (<119 gallons) packaging.

(Contains triphenyl phosphate and isopropylated triaryl phosphates which are Marine Pollutants per 49CFR 172.101 Appendix B)

The information provided is for domestic highway transportation only. This product may be regulated differently when shipped internationally or when shipped in other types of containers or by modes other than that addressed by this section of the SDS.

SECTION 15 - REGULATORY INFORMATION

U.S.:

United States TSCA Inventory: Chemical components are reported in the EPA TSCA Inventory.

OSHA Status: This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR1910.1200)

SARA 313: This product does not contain a chemical listed at or above de minimis concentrations subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.

RCRA Status: This material does not meet RCRA's characteristic definition of ignitability, corrosivity or reactivity and is not listed in 40CFR 261.33.

CA Prop. 65: This product does not contain any ingredient known to the State of California to cause cancer or reproductive toxicity as listed under the State Drinking Water and Toxic Enforcement Act of 1986.

Global Inventories:

Canada:	Listed in DSL
EU:	Reported in EINECS
Japan:	Listed I ENCS
Australia:	Listed in AICS
New Zealand:	Listed I NCIoC
China:	Listed in IECSC
Korea:	Listed in ECL
Taiwan:	Listed
Philippines:	Listed in PICCS

SECTION 16 - OTHER INFORMATION

Issue date: 04-15-2015

Version #: 01

Revision Information: GHS Format



HARWICK
S T A N D A R D

Safety Data Sheet

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