SAFETY DATA SHEET
Tricresyl Phosphate

March 15, 2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Tricresyl Phosphate
CAS#	1330-78-5
Product Use Description:	Fire retarding agent Plasticizers
Company Information:	Rit-Chem Co., Inc. 1 Zeiss Drive – Suite 200 Thornwood, NY 10594 PH: 914-769-9110 FX: 914-769-1408 E-mail: ritchem@ritchem.com
Emergency Response No.	800-535-5053 – INFOTRAC

Recommended use of the chemical and restrictions on use

Recommended use	Fire retardant
Restrictions on use	Industrial use

SECTION 2. HAZARDS IDENTIFICATION

Form	Liquid
Color	Colorless
Odor	Odorless

GHS Classification

Reproductive toxicity	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

GHS Label Element

Signal word	Warning
Hazard pictograms	

Hazard statements	H361 Suspected of damaging fertility or the unborn child H410 Very toxic to aquatic life with long lasting effects
Other hazards	None
Precautionary statements Prevention:	
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P261	Avoid breathing dust/fumes/gas/mist/vapors/spray
P271	Use only outdoors or in a well-ventilated area
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
Response:	
P304 + P340	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P308 + P313	If exposed or concerned: Get medical advice/attention
P312	Call a Poison Center or doctor/physician if you feel unwell
P391	Collect spillage
Storage:	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up
Disposal:	
P501	Dispose of contents/container to an approved waste disposal plant
Self-ignitable	No data available
Carcinogenicity 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
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
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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization
CAS No. 1330-78-5

Description: TRICRESYL PHOSPHATE
Identification Number
EINECS Number 215-548-8

SECTION 4. FIRST AID MEASURES

General information	Take affected person out of danger area and lay them down
If inhaled	Remove to fresh air. Obtain medical attention.
In case of skin contact	Take off contaminated clothing and shoes immediately. Clean effected skin thoroughly with water and mild cleansing agent. No residues shall remain on skin. Call a physician if irritation develops or persists.
In case of eye contact	Rinse opened eye for several minutes under running water. Obtain medical attention. If symptoms persist consult a doctor.
If swallowed	Whether vomiting should be induced or not has to be decided by a doctor. Rinse out mouth and then drink plenty of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously: hold the head of the casualty low with the body in a prone position in order to avoid penetration of vomit into the air tube. Seek medical treatment
Most important symptoms & effects, both acute & delayed	Symptoms may be delayed Toxic effects for reproduction
Notes to physician	The first aid procedure should be established in consultation with the doctor responsible for industrial medicine. The following symptoms may occur: Gastric or intestinal disorders.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing agents	Use firefighting measures that suit the environment. Foam, Carbon Dioxide (C02), Fire extinguishing powder.
Specific hazards during firefighting	Burning produces irritant fumes. Exposure to decomposition products may be a hazard to health.
Specific extinguishing methods	Use water spray to cool unopened containers
Special protective equipment for firefighters	Wear self-contained respiratory protective device
Additional information	Collect contaminated firefighting water separately. It must not enter the sewage system. Dispose of fire debris and contaminated firefighting water in accordance with official regulation.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Person – related safety precautions	Ensure adequate ventilation, avoid formation of dust, wear protective clothing, keep unprotected persons away.
Measures for environmental protection	Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to penetrate the ground/soil. In case of seepage into the ground inform responsible authorities.

Measures for cleaning/collecting	Pick up mechanically. Wearing appropriate personal protective equipment, collect spill with the aid of inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Send for recovery or disposal in suitable container.

SECTION 7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. Keep away from heat and sources of ignition. Avoid eye, skin and clothing contact. Wear appropriate personal protective equipment. Avoid the generation of aerosols from spraying, pouring or vigorous agitation whenever possible, particularly if product is heated. Do not breathe vapors or spray mist. Avoid repeated and prolonged contact.
Storage	Store in tightly sealed containers in a cool, dry, and well ventilated place. Keep away from flames and sparks.
Materials to avoid	None known

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures	Use local ventilation to keep levels below established threshold values. Avoid formation of dust and aerosols. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors. In case of inadequate ventilation wear respiratory protection.

Personal protective equipment

Respiratory protection	Wear a NIOSH/MSHA approved organic cartridge respirator if misting or vapor occurs, or there is potential for airborne exposures to exceed established threshold values. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Wear a NIOSH/MSHA approved self-contained breathing apparatus in emergency situations.
Protection of hands	Wear chemically resistant protective gloves (tested according to DIN EN 374). Check protective gloves prior to each use for their proper condition. The glove material has to be impermeable and resistant to the product, the substance, the preparation. Preventive skin protection by use of skin – protecting agents is recommended. Material of gloves: butyl-rubber, nitrile rubber
Eye protection	Tightly fitting chemical safety googles
Skin & body protection	Impervious clothing
Hygiene measures	Wash thoroughly after handling

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Color	Colorless to light pale yellow
Odor	Aromatic to odorless

Odor threshold	No data available
pH	No data available
Freezing point	<-40 °C
Boiling point/boiling range	241 – 255 °C
Evaporation rate	No data available
Flash point	225 °C Method: ASTM D 93
Auto flammability	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapor pressure	2.8 hPa (20 °C) 3.7 hPa (25 °C)
Relative vapor density	No data available
Relative density	1.16 – 1.18 (20 °C)
Solubility Water solubility	Insoluble
Solubility in other solvents	Methanol & Toluene
Partition coefficient n-octanol/water	Pow: 5.93
Auto ignition temperature	607 °C auto flammability
Thermal decomposition	>300 °C
Viscosity Viscosity, dynamic Viscosity, kinematic	 70 mPa.s (25 °C) No data available

SECTION 10. CHEMICAL STABILITY AND REACTIVITY INFORMATION

Stability Reactivity	Stable under normal conditions of handling and use. No dangerous reaction known under conditions of normal use.
Possibility of hazardous reactions	Hazardous polymerization does not occur
Conditions to avoid	Heat, flames and sparks
Incompatible materials	Water

Hazardous decomposition	Thermal decomposition may produce the following: Oxides of phosphorus, carbon monoxide and carbon dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity	LD50 rat: >5,001 mg/kg
Acute inhalation toxicity	LC50 rat: >5.2 mg/l Exposure time: 4 hours
Acute dermal toxicity	LD50 rabbit: >10,000 mg/kg
Skin irritation (Draize test)	Rabbit: No skin irritation Exposure time: 24 hours
Eye irritation	Rabbit: No eye irritation
Sensitization	Does not cause skin sensitization
Aspiration toxicity	No aspiration toxicity classification
CMR effects tricresyl phosphate (Component)	Carcinogenicity: Animal testing did not show any carcinogenic effects Mutagenicity: In vitro tests did not show mutagenic effects Teratogenicity: Did not show teratogenic effects in animal experiments Reproductive toxicity: Suspected of damaging fertility or the unborn child
Further information	Acute health hazard Chronic health hazard

SECTION 12. ECOLOGICAL INFORMATION

Information on ecotoxicity effects

Toxicity of fish	LC50 rainbow trout: 0.75 mg/l Exposure time: 96 hours
	LC50 rainbow trout: 0.6 mg/l Exposure time: 96 hours
	LC50 fathead minnow: >100 mg/l Exposure time: 96 hours
Toxicity to daphnia & other aquatic invertebrates (OECD Test Guideline 202)	EC50 water flea: 0.146 mg/l Exposure time: 48 hours
	EC50 water flea: 0.27 mg/l Exposure time: 48 hours
Toxicity to bacteria tricresyl phosphate	EC50 activated sludge: 100 mg/l Exposure time: 3 hours Respiration inhibition

Elimination information (persistence and degradability)

Bioaccumulation	No data available
Mobility	No data available
Biodegradability	According to the results of tests of biodegradability this product is not readily biodegradable. 24%
Further information on ecology	
Ecotoxicity assessment Results of PBT assessment	This substance is not considered to be persistent, bioaccumulating & toxic (PBT).
Additional ecological	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Avoid release to the environment

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	Dispose of waste at an approved chemical disposal facility in compliance with all current Local, State and National regulations.. The product should not be allowed to enter drains, water courses or the soil. Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	Dispose of the container in a responsible manner in accordance with applicable regulations. Label precautions should be followed for any residual material in the container.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	3082
Description of goods	Environmentally hazardous substance, liquid, n.o.s. Tricresyl Phosphate
Class	9
Packaging group	III
Environmentally hazardous	Yes

IATA

ID number	UN 3082
Description of goods	Environmentally hazardous substance, liquid, n.o.s. Tricresyl Phosphate
Class	9
Packaging group	III
Environmentally hazardous	No

IMDG

UN number	3082
Description of goods	Environmentally hazardous substance, liquid, n.o.s. Tricresyl Phosphate
Class	9
Packaging group	III
EmS Number 1	F-A
EmS Number 2	S-F
Marine pollutant	Yes

Above applies only to containers 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

Not regulated by DOT and TDG if shipped or transported in packaging less than 450 liters by road and/or rail.

SECTION 15. REGULATORY INFORMATION

TSCA list	Not relevant
EPCRA – Emergency Planning & Community Right-to-Know Act	Not relevant
CERCLA Reportable Quantity	This material does not contain any components with a CERCLA RQ.
SARA304 Reportable Quantity	This material does not contain any components with a Section 304 EHS RQ.
SARA 311/312 Hazards	Chronic Health Hazard
SARA 302	No chemicals in this material are subject to the reporting requirements of SARA Title 111, Section 302.
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 111, Section 313.
California Prop 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

US.TSCA	On TSCA inventory
DSL	All components of this product on the Canadian DSL.
AICS	On the inventory, or in compliance with the inventory.
NZIoC	On the inventory, or in compliance with the inventory.
ENCS	On the inventory, or in compliance with the inventory.
KECI	On the inventory, or in compliance with the inventory.
PICCS	On the inventory, or in compliance with the inventory.
IECSC	On the inventory, or in compliance with the inventory.

SECTION 16. OTHER INFORMATION

This information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.