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

-1-
Part Number 66333-B, 66334-B - Wet-Sol "Plus" Upper Packing Lubricant

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

-2-
PART NUMBER 66333-B, 66334-B - WET-SOL "PLUS" UPPER PACKING LUBRICANT

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 affected 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 (CO2), 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 goggles

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
pH
Freezing point
Boiling point/boiling range
Evaporation rate
Flash point
Auto flammability
Upper explosion limit
Lower explosion limit
Vapor pressure
Relative vapor density
Relative density
Solubility
Water solubility
Solubility in other solvents
Partition coefficient
n-octanol/water
Auto ignition temperature
Thermal decomposition
Viscosity
Viscosity, dynamic
Viscosity, kinematic

SECTION 10. CHEMICAL STABILITY AND REACTIVITY INFORMATION

Stability
Reactivity
Possibility of hazardous reactions
Conditions to avoid
Incompatible materials
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 Carcinogenicity: Animal testing did not show any carcinogenic effects
tricresyl phosphate Mutagenicity: In vitro tests did not show mutagenic effects
  (Component) 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

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: This substance is not considered to be persistent, bioaccumulating & toxic (PBT).

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

<table>
<thead>
<tr>
<th>Description of goods</th>
<th>Environmentally hazardous substance, liquid, n.o.s. Tricresyl Phosphate</th>
</tr>
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<tbody>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packaging group</td>
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<tr>
<td>Environmentally hazardous</td>
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IATA

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IMDG

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<td>EmS Number 1</td>
<td>F-A</td>
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<tr>
<td>EmS Number 2</td>
<td>S-F</td>
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<tr>
<td>Marine pollutant</td>
<td>Yes</td>
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</table>

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

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

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.