Material Safety Data Sheet

TRI BUTYL PHOSPHATE (RXSOL-19-1452-210)

1. Product and Company Identifaction

Product Name	TRI BUTYL PHOSPHATE
Product Code	RXSOL-19-1452-210

Company Details:

RX MARINE INTERNATIONAL
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VASHI ,NEW BOMBAY 400703 INDIA

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Component	CAS No	EC No.	Weight %	Index-No.	Classfication
TRI BUTYL PHOSPHATE	126-73-8	204-800-2	>95	015-014-00-2	Acute Tox. 4; Skin Irrit. 2; Carc. 2; Aquatic Chronic 3; H302, H315, H351, H412

2. Composition / informationon ingredients

3. Hazards Identification

Signal Word	Warning
Hazard Statements	H302 Harmful if swallowed. H315 Causes skin irritation. H351 Suspected of causing cancer. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	P273 Avoid release to the environment. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
Supplemental Hazard Statements	None
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician.
Eye Contact	Flush eyes with water as a precaution.

Swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture	Carbon oxides, Oxides of phosphorus
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods for Containment and Clean Up	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities Store in cool place	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Combustible liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls and personal protection

Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.



Gloves



Suit

9. Physical and chemical properties

Appearance Form	Liquid
Colour	Colourless
Odour	Odorless
Odour Threshold	No data available
pH	No data available
Melting point/freezing point boiling range	79 °C - lit.
Initial boiling point and	180 - 183 °C at 29 hPa - lit.
Flash point	145 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No information available
Explosive limits	No information available
Vapour pressure	36 hPa at 178 °C 9,7 hPa at 150 °C
Vapour density	9,19 - (Air = 1.0)
Relative density	0,979 g/cm3 at 25 °C
Water solubility	Slightly soluble
Partition coefficient: n- octanol/water	No data available
Auto-ignition temperature	> 482 °C
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
Other safety information	Surface tension 25,1 mN/m at 20 °C Relative vapour density 9,19 - (Air = 1.0)

10. Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Other decomposition products - No data available In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - male and female - 1.552 mg/kg LC50 Inhalation - Rat - male and female - 4 h - > 4,242 mg/l (OECD Test Guideline 403) LD50 Dermal - Rabbit - > 3.100 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: Irritating to skin

Serious eye damage/irritation	Eyes - Rabbit Result: Mild eye irritation - 24 h (OECD Test Guideline 405)
Respiratory or skin sensitization in vivo assay	Guinea pig Result: Did not cause sensitisation on laboratory animals.
Germ cell mutagenicity	Chromosome aberration test in vitro Chinese hamster ovary cells Result: negative
Carcinogenicity	Carcinogenicity - Rat - Oral Tumorigenic:Neoplastic by RTECS criteria. Kidney, Ureter, Bladder:Tumors. Carcinogenicity - Mouse - Oral Tumorigenic:Neoplastic by RTECS criteria. Liver:Tumors. Limited evidence of carcinogenicity in animal studies 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.
Reproductive toxicity	Reproductive toxicity - Rat - Oral Effects on Newborn: Growth statistics (e.g., reduced weight gain). Developmental Toxicity - Rat - Oral Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
STOT-single exposure	Single exposure No data available
STOT-repeated exposure	Repeated exposure No data available
Aspiration hazard	RTECS: TC7700000 CNS stimulation., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Toxicity	Toxicity to fish semi-static test LC50 - Oryzias latipes - 17 mg/l - 96 h (OECD Test Guideline 203)
Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 89 % - Readily biodegradable
Bioaccumulative potential	Bioaccumulation Oryzias latipes - 38 d - 93 µg/l Bioconcentration factor (BCF): 21 - 35
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects	Harmful to aquatic life with long lasting effects.

13. Disposal considerations

Waste from Residues / Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. European Waste Catalogue (EWC) According to the
European Waste Catalogue	Waste Codes are not product specific, but application specific.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

14. Transport information

DOT	Not regulated
TDG	Not regulated
Hazard Class	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture	Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

Chemical safety assessment	A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages. DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.