

1. Product and Company Identification

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Product Name PHOSPHORUS OXYCHLORIDE
Part Number RXSOL-60-6606-238

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
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2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
Phosphorus(V) oxychloride	10025-87-3	233-046-7	153,33 g/mol	Cl ₃ OP

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. H372 Causes damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
Precautionary statements	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED Call a POISON CENTER/ doctor if you feel unwell. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/ attention if you feel unwell.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
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. Reacts violently with water., Lachrymator.

4. First Aid Measures

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General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance
If inhaled	After inhalation fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
Eye Contact	After eye contact rinse out with plenty of water. Remove contact lenses.

Swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. 4.2 Most import
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	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

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Flammability	No data available
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing
Unsuitable extinguishing media	Water Foam
Special hazards arising from the substance or mixture	Oxides of phosphorus Hydrogen chloride gas Not combustible. May not get in touch with: Water Ambient fire may liberate hazardous vapours.
Further information	Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	No data available
Environmental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Advice on protection against fire and explosion	No data available
Incompatible materials	No data available
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Advice on safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep workplace dry. Do not allow product to come into contact with water.

Conditions for safe storage including any incompatibilities	No data available
Storage conditions	Store under inert gas. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Keep away from water. Never allow product to get in contact with water during storage.
Storage class	Storage class (TRGS 510) 6.1B Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Acid-resistant protective clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 120 min Material tested: Butoject® (KCL 898)
Respiratory protection	Recommended Filter type Filter B-(P2) The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Other Protection Measure	No data available

9. Physical and chemical properties

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Physical state	Liquid
Colour	Colorless
Odour	Odorless
Odor Threshold	No data available
pH	1 at 20 °C
Melting Point	1,25 °C
Boiling Point	105,8 °C
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	37 hPa at 20 °C
Viscosity	No data available
Density	1,645 g/mL at 25 °C
Relative Density	1,645 at 25 °C
Specific Gravity	No data available
Partition coefficient	No data available

Explosive properties	No data available
Solubility	No data available
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	Reacts violently with water. Contact with water liberates toxic gas.
Chemical stability	sensitive to moisture
Possibility of hazardous reactions	Risk of ignition or formation of inflammable gases or vapours with: Zinc carbon disulfide boron triiodide Organic Substances chromyl chloride A risk of explosion and/or of toxic gas formation exists with the following substances Dimethylformamide Alkali metals dimethyl sulfoxide Water Possible formation of: Hydrogen chloride gas phosphine Violent reactions possible with: Acetone
Conditions to avoid	Avoid contact with combustible material (paper, wool, oil). Moisture.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - 380 mg/kg Remarks: (ECHA) Acute toxicity estimate Inhalation - 4 h - 0,51 mg/l - vapor (Expert judgment) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Skin corrosion/irritation	Skin - Rabbit Causes severe burns. (OECD Test Guideline 404) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Serious eye damage/irritation	Eyes - Rabbit Causes burns. (OECD Test Guideline 405)
Respiratory or skin sensitization	No data available
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Additional Information	The substance/mixture does not contain Aldrich- 262099 Page 9 of 13 The life science business of Merck operates as MilliporeSigma in the US and Canada components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. RTECS: TH4897000 Redness, corneal injury, Cough, Shortness of breath, Dizziness, Headache, chest pain, Nausea, Vomiting, Kidney injury may occur., Abdominal pain To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Decomposition of the substance with tissue moisture. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

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Persistence and degradability	The methods for determining the biological degradability are not applicable to inorganic substances.
Toxicity to fish	Static test LC50 - Oncorhynchus mykiss (rainbow trout) - 50,6 mg/196 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h

Toxicity	(OECD Test Guideline 202)
Toxicity to bacteria	No data available
Toxicity to algae	EC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209)
Products Biodegradation	Static test NOEC - Desmodesmus subspicatus (green algae) - 12,5 mg/l - 72 h (OECD Test Guideline 201)
Mobility in soil	No data available
Results of PBT and vPvB assessment	No data available
Endocrine disrupting properties	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	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
	May be harmful to aquatic organisms due to the shift of the pH. Product reacts with water. Depending on the concentration, phosphorus compounds may contribute to the eutrophication of water supplies. Discharge into the environment must be avoided.

13. Disposal considerations

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Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:1810	IMDG:1810	IATA:1810
UN proper shipping name	ADR/RID:PHOSPHORUS OXYCHLORIDE	IMDG:PHOSPHORUS OXYCHLORIDE	IATA:PHOSPHORUS OXYCHLORIDE
Transport hazard class(es)	ADR/RID:6.1 (8)	IMDG:6.1 (8)	IATA:6.1 (8)
Packaging group	ADR/RID:I	IMDG:I	IATA:I
Environmental hazards	ADR/RID:No	IMDG:No	IATA:No
Special precautions for user	Tunnel restriction code (C/D)		
Further information	No data available		

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

16. Other information

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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
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