

Material Safety Data Sheet

Phosphorus Oxychloride, Reagent, 99+% (Tit.)

ACC# 01206

Section 1 - Chemical Product and Company Identification

MSDS Name: Phosphorus Oxychloride, Reagent, 99+% (Tit.)

Catalog Numbers: AC417900000, AC417905000

Synonyms: Phosphorous (III) Oxide; Phosphorous Oxytrichloride; Phosphoryl Chloride

Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
10025-87-3	Phosphorus Oxychloride	99+	233-046-7

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid.

Danger! Corrosive. Causes severe eye and skin burns. Causes severe digestive and respiratory tract burns. Water-reactive. May be fatal if inhaled. Harmful if swallowed.

Target Organs: Kidneys, liver.

Potential Health Effects

Eye: Causes severe eye irritation and burns.

Skin: Causes severe skin irritation and burns. Causes redness and pain.

Ingestion: Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma.

Inhalation: May be fatal if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation. Vapors may cause dizziness or suffocation. May cause nausea, dizziness, and headache. Exposure may produce pulmonary edema which may progress to pneumonia, and cardiac failure may intervene.

Chronic: May cause liver and kidney damage. Chronic exposure can lead to necrosis of the jaw, or 'phossy-jaw'.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Remove all contaminated clothing immediately.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Call a poison control center.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: Evacuate area and fight fire from a safe distance. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Water Reactive.

Extinguishing Media: DO NOT USE WATER! Use dry chemical or carbon dioxide.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: Not published.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Follow all MSDS and label precautions even after container is emptied because they may contain product residues. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Do not allow contact with water.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Store in a suitable container in a dry area above the substance's freezing point. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Phosphorus Oxychloride	0.1 ppm TWA	0.1 ppm TWA; 0.6 mg/m ³ TWA	none listed

OSHA Vacated PELs: Phosphorus Oxychloride: 0.1 ppm TWA; 0.6 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: musty hay - pungent odor

pH: Not available.

Vapor Pressure: 40 mm Hg @ 27.3

Vapor Density: 5.3

Evaporation Rate: 1

Viscosity: Not available.

Boiling Point: 105.8 deg C

Freezing/Melting Point: 34.0 deg F

Decomposition Temperature: Not available.

Solubility: Reacts.

Specific Gravity/Density: 1.7000g/cm³

Molecular Formula: Cl₃OP

Molecular Weight: 153.33

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Combines vigorously with water with the evolution of heat.

Conditions to Avoid: Incompatible materials, contact with water, electrical sparks.

Incompatibilities with Other Materials: Metals, acids, alcohols, aluminum, amines, phenols. Explosive reactions with 2,6-Dimethylpyridine N-Oxide, Dimethyl Sulfoxide, Ferrocene-1,1'Dicarboxylic Acid, Pyridine N-Oxide (above 60°C), Sodium + Heat. Violent reactions with BI₃, Carbon Disulfide, 2,5-Dimethylpyrrole + Dimethyl Formamide, Organic Matter, Zinc Powder. Reacts violently with water and/or steam to produce heat and toxic corrosive fumes.

Hazardous Decomposition Products: Hydrogen chloride, phosphine, oxides of phosphorus, irritating and toxic fumes and gases, phosphorous fumes.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 10025-87-3: TH4897000

LD50/LC50:

CAS# 10025-87-3:

Inhalation, mouse: LC50 = 404 mg/m³/2H;

Inhalation, rat: LC50 = 32 ppm/4H;

Oral, mouse: LD50 = 327 mg/kg;

Oral, rat: LD50 = 36 mg/kg;

Oral, rat: LD50 = 380 mg/kg;

Carcinogenicity:

CAS# 10025-87-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.**Teratogenicity:** No data available.**Reproductive Effects:** No data available.**Mutagenicity:** No data available.**Neurotoxicity:** No data available.**Other Studies:****Section 12 - Ecological Information**

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.**Section 14 - Transport Information**

	US DOT	Canada TDG
Shipping Name:	PHOSPHORUS OXYCHLORIDE	No information available.
Hazard Class:	8	
UN Number:	UN1810	
Packing Group:	II	

Section 15 - Regulatory Information**US FEDERAL****TSCA**

CAS# 10025-87-3 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 10025-87-3: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 10025-87-3: 500 lb TPQ

SARA Codes

CAS # 10025-87-3: immediate, delayed, reactive.

Section 313 No chemicals are reportable under Section 313.**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 10025-87-3 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 10025-87-3 is considered highly hazardous by OSHA.

STATE

CAS# 10025-87-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

C

Risk Phrases:

R 34 Causes burns.

R 37 Irritating to respiratory system.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 7/8 Keep container tightly closed and dry.

WGK (Water Danger/Protection)

CAS# 10025-87-3: 1

Canada - DSL/NDSL

CAS# 10025-87-3 is listed on Canada's DSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 10025-87-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/06/1998

Revision #4 Date: 10/03/2005

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 Fisher 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 Fisher has been advised of the possibility of such damages.