

MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: Diethyl chlorophosphate
Catalog Numbers: AC407240000, AC407241000
Synonyms: Diethyl phosphorochloridate.
Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium
Company Identification: (USA) Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#: 814-49-3
Chemical Name: Diethyl chlorophosphate
%: 95
EINECS#: 212-396-4

Hazard Symbols: T+



Risk Phrases: 26/27/28 29 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Combustible liquid and vapor. Causes burns by all exposure routes. May be fatal if inhaled, absorbed through the skin or swallowed. Contact with water liberates toxic gas. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns.
Skin: May be fatal if absorbed through the skin. Causes skin burns.
Ingestion: May be fatal if swallowed. Causes gastrointestinal tract burns.
Inhalation: May be fatal if inhaled. Causes chemical burns to the respiratory tract.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid immediately. 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 if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Water reactive. Material will react with water and may release a flammable and/or toxic gas. Combustible liquid and vapor.

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

Autoignition Temperature: Not available

Flash Point: 61 deg C (141.80 deg F)

Explosion Limits: N/A

Lower:

Explosion Limits: N/A

Upper:

NFPA Rating: ; Special Hazard: -W-

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not allow contact with water. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Diethyl chlorophosphate	none listed	none listed	none listed

OSHA Vacated PELs: Diethyl chlorophosphate: None listed

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or

European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Color: colorless
Odor: Not available
pH: Not available
Vapor Pressure: 0.1 mm Hg @ 25 deg C
Vapor Density: 5.94
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 81 deg C @ 6 mm Hg (177.80°F)
Freezing/Melting Point: -60 deg C (-76.00°F)
Decomposition Temperature:
Solubility in water: Decomposes.
Specific Gravity/Density: 1.190 g/cm³
Molecular Formula: C₄H₁₀ClO₃P
Molecular Weight: 172.55

Section 10 - Stability and Reactivity

Chemical Stability: Reacts with water to form toxic fumes.
Conditions to Avoid: Incompatible materials, ignition sources, exposure to moist air or water.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, oxides of phosphorus, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 814-49-3: TD1400000
LD50/LC50: RTECS:
CAS# 814-49-3: Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 100 mg/kg;
Oral, rat: LD50 = 11 mg/kg;
Skin, rabbit: LD50 = 8 uL/kg;
Carcinogenicity: Diethyl chlorophosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: ORGANOPHOSPHORUS COMPOUND, TOXIC, N.O.S.
Hazard Class: 6.1
UN Number: UN3278
Packing Group: II
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+

Risk Phrases:

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R 29 Contact with water liberates toxic gas.

R 34 Causes burns.

Safety Phrases:

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

S 28A After contact with skin, wash immediately with plenty of water.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

WGK (Water Danger/Protection)

CAS# 814-49-3: Not available

Canada

CAS# 814-49-3 is listed on Canada's NDSL List

Canadian WHMIS Classifications: D1A, E, B3

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.

CAS# 814-49-3 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 814-49-3 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 2/19/1998

Revision #5 Date 7/23/2007

Revisions were made in Sections: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

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