Diisopropyl Phosphorochloridate: sc-211341

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Diisopropyl Phosphorochloridate
Catalog Number: sc-211341

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

WHMIS Classification

D1A
E

Very Toxic Material Causing Immediate and Serious Toxic Effects

Highly toxic by ingestion
Highly toxic by skin absorption
Highly toxic by inhalation
Corrosive

HMIS Classification

Health hazard: 4
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

Potential Health Effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be fatal if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion May be fatal if swallowed.

GHS Classification

Acute toxicity, Inhalation (Category 2)
Acute toxicity, Dermal (Category 2)
Acute toxicity, Oral (Category 2)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Signal word Danger

Hazard statements

H300/H310 Fatal if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.

Precautionary statements

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory protection.
P302/P350 IF ON SKIN: Gently wash with plenty of soap and water.
P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

GHS Label Pictograms

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Formula: $C_6H_{14}ClO_3P$
Molecular Weight: 200.60
CAS Registry #: 2574-25-6
Synonyms: Phosphorochloridic Acid Bis(1-methylethyl) Ester; Isopropyl pPhosphorochloridate; Diisopropyl Chlorophosphate

4. FIRST AID MEASURES

General Advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust or aerosol formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust or aerosols. Provide appropriate exhaust ventilation at places where dust/aerosol is formed. Normal measures for preventative fire protection.

Conditions for safe storage
Keep container tightly close in a dry and well-ventilated place. Hygroscopic. Moisture sensitive. Store at -20^{o}C under inert atmosphere.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (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).

Hand 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.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and 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.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Specific engineering controls
Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
liquid

Safety data

pH	N/A	Melting point	N/A
Boiling point	N/A	Flash point	N/A
Ignition temperature	N/A	Lower explosion limit	N/A
Upper explosion limit	N/A	Vapor pressure	N/A
Density	N/A	Water solubility	N/A

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents. Water.

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: carbon oxides, phosphorous oxides, hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
no data available

Irritation and corrosion
no data available

Sensitization
no data available

Carcinogenicity
IARC: To the best of our knowledge, this compound has not been identified as a possible or potential human carcinogen by IARC.

Reproductive toxicity
no data available

Potential health effects
Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be fatal if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion May be fatal if swallowed.

Signs and Symptoms of Exposure
Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites., Headache, Nausea, Vomiting, Dizziness, Drowsiness, Confusion, Weakness, Muscle cramps/spasms, Change in pupil size, Fever, Seizures, Incoordination. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: TD1500000

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 3278 Class: 6.1 Packing group: III
Proper shipping name: Organphosphorus compound, toxic, liquid, n.o.s, n.o.s. (Diisopropyl chlorophosphate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 3278 Class: 6.1 Packing group: III EMS-No: F-A, S-B
Proper shipping name: Organphosphorus compound, toxic, liquid, n.o.s, n.o.s. (Diisopropyl chlorophosphate)
Marine pollutant: No

IATA
UN-Number: 3278 Class: 6.1 Packing group: III
Proper shipping name: Organphosphorus compound, toxic, liquid, n.o.s, n.o.s. (Diisopropyl chlorophosphate)

15. REGULATORY INFORMATION

DSL Status
Product is not on the Canadian DSL or NDSL list.

WHMIS Classification

D1A E	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by ingestion Highly toxic by skin absorption Highly toxic by inhalation Corrosive

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.