Phenylphosphonic dichloride: sc-250705

MATERIAL SAFETY DATA SHEET

1 Identification of substance:

Product Name: **Phenylphosphonic dichloride**

Catalog Number: sc-250705

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

Classification of the substance or mixture

GHS05 Corrosion

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

GHS07

H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R34: Causes burns.

Xn; Harmful

R22: Harmful if swallowed.

R14: Reacts violently with water.

Label elements
Labelling according to EU guidelines:
Code letter and hazard designation of product:
C Corrosive
Risk phrases:
14 Reacts violently with water.
22 Harmful if swallowed.
34 Causes burns.
Safety phrases:
8 Keep container dry.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
30 Never add water to this product.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately.

Hazard description:
WHMIS classification

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

HEALTH	3
FIRE	1
REACTIVITY	2

Health (acute effects) = 3
Flammability = 1
Reactivity = 2

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
(CAS#) Description:
Phenylphosphonic dichloride (CAS# 824-72-6)
Identification number(s):
EINECS Number: 212-534-3

4 First aid measures

Description of first aid measures
General information Immediately remove any clothing soiled by the product.
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing Seek immediate medical advice.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents CO2, sand, extinguishing powder. Do not use water.
For safety reasons unsuitable extinguishing agents Water
Special hazards arising from the substance or mixture
Reacts violently with water
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Hydrogen chloride (HCl)
Phosphorus oxides
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires: Keep ignition sources away.
Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Store away from water/moisture.
Store away from oxidizing agents.

Further information about storage conditions:
Store under dry inert gas. Dessicate at room temperature.
Protect from humidity and water.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
Additional information: No data

Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
Material of gloves
The selection of suitable gloves not only depends on the material, but also on quality.
Quality will vary from manufacturer to manufacturer.
Eye protection:
Safety glasses
Tightly sealed goggles
Full face protection
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties	
General Information	
Appearance:	
Form:	Liquid
Formula:	$C_6H_5POCl_2$
Weight:	194.98
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	258°C (496 °F)
Sublimation temperature / start:	Not determined
Flash point:	204°C (399 °F)
Flammability (solid, gaseous)	Not applicable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density at 20°C (68 °F):	1.379 g/cm³ (11.508 lbs/gal)
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Reacts violently
Segregation coefficient (n-octonol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions Reacts violently with water
Incompatible materials:
Active metals
Bases
Water/moisture
Oxidizing agents
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Hydrogen chloride (HCl)
Phosphorus oxides (e.g. P2O5)

11 Toxicological information

Information on toxicological effects
Acute toxicity:

LD/LC50 values that are relevant for classification:		
Oral	LD50	681 mg/kg (rat)

Primary irritant effect:
on the skin:
Corrosive effect on skin and mucous membranes.
Irritant to skin and mucous membranes.
on the eye:
Strong corrosive effect.
Irritating effect.
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity:
Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus. May cause skin burns or irritation depending on the severity of the exposure.
Organic phosphorus compounds exhibit a wide range of toxicity. Most are skin and eye irritants with the more volatile also being respiratory irritants. Those exhibiting substantial water reactivity will have stronger irritating properties and may be corrosive enough to cause severe burns. Some organic phosphorus compounds are cholinesterase inhibitors. Symptoms associated with these include muscle twitching, convulsions, flaccid paralysis, coma, respiratory failure. They can be highly paralytic.
Additional toxicological information:
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information

Toxicity
Acquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Behavior in environmental systems:
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

Hazard class:	8
Identification number:	UN3094
Packing group:	II
Proper shipping name (technical name):	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S. (Phenylphosphonic dichloride)
Label	8+4.3

Land transport ADR/RID (cross-border)

ADR/RID class:	8 (C3) Corrosive substances
Danger code (Kemler):	80
UN-Number:	3265
Packaging group:	II
UN proper shipping name:	3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Phenylphosphonic dichloride)

Maritime transport IMDG:

IMDG Class:	8
UN Number:	3265
Label	8
Packaging group:	II
Marine pollutant:	No
Segregation groups	Acids
Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Phenylphosphonic dichloride)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class:	8
UN/ID Number:	3265
Label	8
Packaging group:	II
Proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Phenylphosphonic dichloride)

UN "Model Regulation": UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., 8, II
Special precautions for user Warning: Corrosive substances
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product related hazard informations:

Hazard symbols:
C Corrosive

Risk phrases:
14 Reacts violently with water.
22 Harmful if swallowed.
34 Causes burns.

Safety phrases:
8 Keep container dry.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
30 Never add water to this product.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use: *For use only by technically qualified individuals.*
Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

16 Other information:

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.

7/9/2013