1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description Phosphorus Oxychloride

Other means of identification

UN-No UN 1810

Recommended use of the chemical and restriction on use

Recommended use Industrial Chemical
Plasticizers, Pharmaceuticals, agrochemicals, flame retardant

Uses advised against Activities contrary to label recommendations

Details of the Supplier of the Safety Data Sheet

Supplier Address

UPL Limited
746,750,GIDC., P.B. No-9, Jhagadia-393110,
Dist-Bharuch, Gujarat.
Tel: (02645)226011-15
Fax No: (02645)226017,226018

E-mail address info.in@uniphos.com

Emergency Telephone Number

Company Phone Number +91-(022)- 2646-8000
Emergency telephone number +91-(02645)226011-15

2. Hazard Identification

Classification

Acute Oral Toxicity Category 4 - (H302)
Acute Inhalation Toxicity Category 2 - (H330)
Skin Corrosion/Irritation Category 1 - (H314)
Eye Damage/Irritation Category 1 - (H318)
STOT - Repeated Exposure Category 1 - (H371)

Label elements

Signal word Danger

Hazard Statements
Safety Data Sheet

Preparation Date 30-June-2017
Revision Date 30-June-2017
Revision Number 01

H302 - Harmful if swallowed
H330 - Toxic if inhaled
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H370 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention
P264 Wash thoroughly … after handling.
P270 Do not eat, drink or smoke while using this product.
P260 Do not breathe dust/mist/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P284 Wear respiratory protection.
P280 Wear protective gloves/clothing/eye protection/face protection.

Response
P301+P311 IF SWALLOWED: Immediately call a POISON CENTER/doctor or physician if you feel unwell.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P321 Specific treatment (see … on this label)
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P320 Specific treatment is urgent (see … on this label)
P302+P361+P353 IF ON SKIN (or hair): Take off contaminated all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
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 CENTRE/doctor or physician.
P312 Call a POISON CENTER/ doctor or physician if you feel unwell.
P391 Collect spillage.

Storage
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal
P501 Dispose of contents/container to an approved waste disposal plant

Other Information
No other hazards known.

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>W/W %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus Oxychloride</td>
<td>10025-87-3</td>
<td>&lt;=100</td>
</tr>
</tbody>
</table>

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

First-aid measures

Eye contact Hold eyes open and rinse slowly and gently with water for 15 - 30 minutes. Remove contact lenses, if present and easy to do, then continue rinsing eye. Immediately call
a POISON CENTRE/doctor or physician.

Skin contact
Remove contaminated clothing and shoes immediately, then wash with plenty of water. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned. Immediately call a POISON CENTRE/doctor or physician.

Ingestion
Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting unless told by physician. If vomiting occurs ensure patient can breathe. Get medical attention, if you feel unwell.

Inhalation
IF INHALED: Immediately remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. Seek Immediate medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects
The most important known symptoms and effects are described in the labelling (See section 2) and/or in section 11.

Indication of immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically and supportively.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Water spray, dry chemical or carbon dioxide

Unsuitable extinguishing media
High pressure water jets may scatter spilled material

Special hazards arising from the substance or mixture

Special Hazard
Thermal decomposition can lead to release of irritating or toxic fumes (or gases) in fire.

Hazardous combustion products
Hydrogen chloride gas, Oxides of phosphorus

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and protective suit. Use standard firefighting procedures and consider the hazards of involved material.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Avoid dust/mist formation. Do not eat, drink or smoke while using this product. Avoid contact with skin and eyes. Avoid breathing dust/mist. Keep unnecessary people away. Isolate area. Keep out of low areas.

Environmental precautions
Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods and material for containment and cleaning up

Methods for Clean-Up
Pick and arrange disposal without creating dust. Sweep up and shovel into suitable container for disposal. Follow all label instructions regarding spill clean-up and residual disposal methods.
Reference to other sections
Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

7. Handling and Storage

Precautions for safe handling

Handling
Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust/mist. Ensure adequate ventilation. Wash thoroughly after handling. Avoid release to environment. Empty containers may contain hazardous residues. Do not reuse empty container.

Conditions for safe storage, including any incompatibilities

Storage
Store in accordance with local regulation. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from incompatible material. Do not store in unlabeled containers. Do not store material near food, feed or drinking water.

Incompatible materials
Strong bases, alcohols, amines, Metals

8. Exposure Controls/Personal Protection

Exposure Guideline
Apply technical measures to comply with the occupational exposure limit.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH OEL</th>
<th>CHINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus Oxchloride</td>
<td>TWA: 0.1 PPM</td>
<td>TWA: 0.3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL: 0.6 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Environmental exposure controls
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Eye/Face Protection
Avoid contact with eyes. Where there is potential for eye contact have eye flushing equipment available. Tightly fitting safety goggles. Face-shield.

Skin/Hand Protection
Wear protective gloves/clothing. Long-sleeved clothing

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Local authorities should be advised if significant spillage cannot be contained.

General hygiene considerations
Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>VALUES</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless, clear, strongly fuming liquid with pungent odor</td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Fuming</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Clear colorless</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Reactivity

Reacts violently with water.

Chemical stability

Reacts violently with water. Moisture sensitive. Contact with water liberates toxic gases.

Possibility of hazardous reaction

None under normal processing.

Conditions to avoid


Incompatible Materials

Strong bases, alcohols, amines, Metals

Hazardous decomposition products

Thermal decomposition can lead to release of irritating or toxic fumes (or gases) in fire. Thermal hazardous decomposition products: Hydrogen chloride gas, Oxides of phosphorus

11. Toxicological Information

Information on Toxicological Effects

LD50 Oral = 110 mg/kg (Source: PPDB)
LD50 Dermal = 1000 mg/kg (Source: PPDB)
LC50 Inhalation = 0.303 mg/L Rat (4 hr) (Exposure: Dust/mist; Source: PPDB)

Local effect
Inhalation
Toxic if inhaled

Eye contact
Causes serious eye damage

Skin contact
Causes severe skin burns. Harmful in contact with skin.

Ingestion
Harmful if swallowed

**Chronic toxicity**

Skin corrosion/Irritation
Causes severe skin burns and eye damage.

Eye damage/Irritation
Causes serious eye damage.

Sensitization
Based on available data, classification criteria are not met.

Mutagenic effects
Based on available data, classification criteria are not met.

Carcinogenic effects
Based on available data, classification criteria are not met.

Reproductive effects
Based on available data, classification criteria are not met.

STOT - Single Exposure
May cause damage to organs through prolonged or repeated exposure

STOT - Repeated exposure
Not applicable

**12. Ecological Information**

**Ecotoxicity**

Fish/LC50/96hr = 4630 mg/L

Daphnia/EC50/48hr = >100 mg/L

Alga/EC50/72hr = >100 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulative Potential**

No information available.

**Other Adverse Effects**

No information available.

**13. Disposal Considerations**

**Waste Treatment Methods**

**Waste Disposal Method**
Dispose of in accordance with applicable Federal, State, local laws and regulations.

**Contaminated packaging**
Empty container should be taken for local recycling, recovery or waste disposal. Do not re-use container. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**14. Transport Information**

**IMDG/IMO**

UN-No
UN 1810

Proper Shipping name
Phosphorus Oxychloride

Hazard class
6.1

Subsidiary Hazard class
8

Packing group
II

EMS No.
F-A, S-B

Marine pollutant
Yes

**IATA/ICAO**
UN-No: UN 1810
Proper Shipping name: Phosphorus oxychloride
Hazard class: 6.1
Subsidiary Hazard class: 8
Packing group: III
Marine pollutant: Yes

15. Regulatory Information

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>USINV</td>
<td></td>
</tr>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td></td>
</tr>
</tbody>
</table>

- : Not listed/Determines

Legend

USINV - Total TSCA/FIFRA Inventory
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

16. Other Information

Preparation date: 30-June-2017
Revision date: 30-June-2017
Revision Summary: 01

Disclaimer

UPL, Limited. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with other materials or in any process. Further, since the conditions and methods of use are beyond the control of UPL, Limited. and UPL Limited. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

End of Safety Data Sheet