# MATERIAL SAFETY DATA SHEET

**Product name**: Phosflex 418  
**Product id**: 7016E4  
**Revision date**: 17/05/2011  
**Supersedes**: 12/05/2010  
**Revision**: 2

## 1. Identification of the substance & the company

**Chemical name**: C12-C16 (mixed linear alcohols) alkyl diphenyl phosphate  
**Chemical family**: Aryl/alkyl phosphate  
**Type of product and use**: Flame retardant additive  
**Supplier**: ICL-IP America Inc.  
622 Emerson Road - Suite 500  
St Louis, Missouri 63141, USA  
Tel: (314)983-7884 Fax: (314)983-7607

**Emergency Telephone**: Chemtrec (800)424-9300  
Medical: PROSAR 1-888-875-1685 (24HRS)

## 2. Hazards identification

**Emergency overview**: Inhalation of vapors, mists or aerosols may cause respiratory tract irritation

**Potential Health Effects:**
- **Eye Contact**: May cause mild to moderate eye irritation
- **Skin contact**: May cause skin irritation, especially on prolonged contact
- **Ingestion**: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**NFPA Ratings (Scale 0-4)**: Health = 1, Fire = 1, Reactivity = 0

**HMIS Ratings (Scale 0-4)**: Health = 1, Fire =1, Reactivity = 0.

## 3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-12 diphenyl ester of phosphoric acid</td>
<td>27460-02-2</td>
<td>~60-80</td>
</tr>
<tr>
<td>C-14 diphenyl ester of phosphoric acid</td>
<td>142474-86-0</td>
<td>~5-20</td>
</tr>
</tbody>
</table>
4. First-aid measures

Eye contact
Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact
Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention if irritation persists.

Inhalation
Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
In case of inhalation, remove person to fresh air.

Ingestion
If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

**************************************************************************
NOTE: Never give an unconscious person anything to drink.
**************************************************************************

Notes to the physician
Treat symptomatically and supportively.

5. Fire - fighting measures

Suitable extinguishing media
Water spray, carbon dioxide (CO₂), dry chemical powder or appropriate foam.

Fire fighting procedure
Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode

Unusual fire and explosion hazards
This product sinks in water

6. Accidental release measures

Personal precautions
Wear appropriate safety clothing and eye/face protection (see Section 8)
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Methods for cleaning up
Stop leaks. Soak up with sand or other suitable absorbant and dispose of as solid waste.
If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. In case of water spill; vacuum off oily layer from water and place in labeled waste container(s) for disposal.

7. Handling and storage

Handling
Avoid bodily contact.
Keep containers tightly closed. Always mix well before using

Storage
No special storage required.

8. Exposure controls / personal protection

Exposure Limits:

<table>
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<tr>
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<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
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<tr>
<td>C-12 diphenyl ester of phosphoric acid 27460-02-2</td>
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<td>C-14 diphenyl ester of phosphoric acid 142474-86-0</td>
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<td>Not determined</td>
</tr>
<tr>
<td>C-16 diphenyl ester of phosphoric acid 56827-92-0</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
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</table>

Ventilation requirements
Local exhaust ventilation may be necessary for some operations.

Personal protective equipment:
- Respiratory protection
  None to our knowledge
  In case of insufficient ventilation wear suitable respiratory equipment.
- Hand protection
  Neoprene gloves
- Eye protection
  Chemical safety goggles
- Skin and body protection
  Body covering clothes and boots
Hygiene measures
Safety shower and eye bath should be provided. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.
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9. Physical and chemical properties

- Appearance: Colourless liquid
- Odour: Characteristic
- Boiling point/range: 230°C
- Melting point/range: Not determined
- Flash point: 229°C (445°F) (open cup)
- Auto-ignition temperature: Not determined
- Vapour pressure: Not determined
- Evaporation rate (ether=1): Not determined
- Vapor density: Not determined
- Viscosity: 25 cSt (25°C)
- Solubility:
  - Solubility in water: < 0.2 mg/L
  - Specific gravity: 1.028-1.044 (25°C)

10. Stability and reactivity

- Stability: Stable under normal conditions.
- Materials to avoid: Strong oxidizing agents.
- Hazardous decomposition products: Carbon dioxide and carbon monoxide
- Hazardous polymerization: Will not occur

11. Toxicological information

- Acute toxicity:
  - Rat oral LD50: > 5000 mg/kg
- Carcinogenicity:
  - Not classified by IARC
  - Not included in NTP 11th Report on Carcinogens
  - Not classified as a carcinogen by USA OSHA

12. Ecological information

- Information on ecological effects: No information available

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13. Disposal considerations

Waste disposal
Observe all federal, state and local environmental regulations when disposing of this material

14. Transportation information

DOT
Not regulated

IMO
Not regulated

ICAO/IATA
Not regulated

15. Regulatory information

USA
Reported in the EPA TSCA Inventory.

-SARA 313
This product does not contain a chemical listed at or above de minimis concentrations.

Canada
Listed in NDSL

New Zealand Inventory
Listed in NZIoC

Philippines
Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)

# Material Safety Data Sheet

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## Health, Safety & Environment Policy

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs.

We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources.

Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation.

Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe.

Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations.

Implement documented management systems consistent with and for promotion of the Responsible Care ethics.

**TO MEET THIS COMMITMENT WE WILL:**

- Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers.
- Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles.
- Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations.
- Educate and train employees, contractors and customers to improve their HSE performance.
- Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner.
- Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals.
- Support Product Stewardship programs in cooperation with customers, distributors and transporters.

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**Prepared by**

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End of safety data sheet