



SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name	PHOSFLEX TXP	
Product id	7071	
Revision date	02/12/2013	Revision: 3
Supersedes	07/03/2012	

1. Identification of the substance & the company

Chemical name	Trixylyl phosphate
Synonym(s)	TXP; Phenol, dimethylphosphate (3:1) Trixylenyl phosphate
Chemical formula	C ₂₄ H ₂₇ O ₄ P
Chemical family	Aryl phosphate
Type of product and use	Flame-retardant plasticizer
Supplier	ICL-IP America Inc. 622 Emerson Road - Suite 500 St Louis, Missouri 63141, USA Tel:(314)983-7884 Fax:(314)983-7607 e-mail:msdsinfo@icl-ip.com
Emergency Telephone	Chemtrec (800)424-9300 Medical (800)420-9236

2. Hazards identification

GHS classification



Signal Word DANGER

Hazard statements
H360F - May damage fertility
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects



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Product id 7071
Revision date 02/12/2013 **Revision:** 3
Supersedes 07/03/2012

Precautionary statements P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container in accordance with national and international regulations

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

Components	CAS No.	Weight %
Trixylyl phosphate	25155-23-1	100

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 reuse. Get medical attention if irritation occurs.

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

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

NOTE: Never give an unconscious person anything to drink

Most important symptoms and effects, acute or delayed

May damage fertility
May cause damage to organs through prolonged or repeated exposure.

Notes to the physician Treat symptomatically and supportively.



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5. Fire - fighting measures

Suitable extinguishing media Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

Unusual fire and explosion hazards When heated to decomposition, may release poisonous and corrosive fumes of carbon dioxide, carbon monoxide and phosphorus oxides.

Fire fighting procedure Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA). Contain runoff to prevent entry into water or drainage systems.

6. Accidental release measures

Personal precautions Wear appropriate safety clothing and eye/face protection (see Section 8).

Environmental precautions Prevent product from entering drains, ditches and rivers.

Methods for cleaning up Ventilate area and wash spill site after material pickup is complete. Soak up with sand or other suitable absorbant and dispose of as solid waste. Collect in suitable and properly labeled containers.

7. Handling and storage

Handling Avoid bodily contact. Keep containers tightly closed.

Storage Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid"). Maximum recommended storage temperature of 65°C (149°F) Store above 4.4°C (40° F) for improved pumping rates. Temperatures between 27 - 37.8°C (80 - 100°F) provide good flow rates.

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
Trixylyl phosphate 25155-23-1	Not determined	Not determined

Ventilation requirements Provide adequate ventilation.



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Personal protective equipment:

- **Respiratory protection** Under normal use conditions, no breathing protection is required, due to the nonvolatile nature of the fluid.
Full-face fitted air-purifying respirator equipped with organic vapor cartridges is needed when an aerosol is formed with no elevated temperatures.
Acid cartridges should be added where the fluid comes into contact with a heated surface with generation of smoke and aerosols.
 - **Hand protection** Neoprene gloves
 - **Eye protection** Chemical safety goggles
 - **Skin and body protection** Body covering clothes and boots.
- Hygiene measures** Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance	Clear, transparent liquid
Odor	Slight
Melting point/range	-20 - -15°C
Boiling point/range	394.1°C
Pour point	-17.77°C (0 °F)
Flash point	>200°C
Vapor pressure	0.21 kPa (20°C) 0.27 kPa (25°C)
Relative density	1.142 (20°C)
Solubility:	
- Solubility in water	<0.02 mg/L
Partition coefficient (n-octanol/water)	Log Pow = > 6.2
Auto-ignition temperature	Not self-ignitable
Viscosity	217.5 mPa*sec dynamic (20°C) 66.6mPa*sec dynamic (35°C)
Explosive properties	There are no chemical groups associated with explosive properties present in the molecule
Oxidising properties	No oxidising properties can be predicted on the basis of chemical structure



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10. Stability and reactivity

Stability	Stable under normal conditions.
Conditions to avoid	Exposure to moisture.
Materials to avoid	Strong oxidizers, strong acids and strong alkalis. It hydrolyzes slowly at normal temperatures in acidic or alkaline aqueous solutions.
Hazardous decomposition products	Carbon dioxide and carbon monoxide Phosphorus oxides,

11. Toxicological information

Acute toxicity:	
- Rat oral LD50	> 5000 mg/kg
- Rabbit dermal LD50	> 2000 mg/kg
- Eye irritation (rabbit)	Mild irritant
- Dermal irritation (rabbit)	Mild irritant.
Target organ effects	Combined Oral Repeated Dose and Reproductive/Developmental Toxicity Screening study in rats: affected organs: adrenals, testes, epididymides, ovaries, liver (females only)
Sub-chronic toxicity:	Rats that received daily oral doses of 200 mg/kg/day or 1000 mg/kg/day for three or more weeks showed a reduction in plasma cholinesterase activity. Neurotoxicity tests conducted during this subchronic toxicity study, including a functional observation battery and motor activity assessment did not show any signs of neurotoxicity.
Chronic toxicity	No data available
Mutagenicity	Not mutagenic by the Ames Test. Not clastogenic in chromosome aberration test with Chinese hamster ovary cells.
Carcinogenicity	Not classified by IARC Not included in NTP 12th Report on Carcinogens Not classified as a carcinogen by USA OSHA
Reproductive toxicity	In a reproductive toxicity test, male and female rats received daily oral doses of the product for two weeks after which they were mated. Although mating was successful, there was a treatment-related decrease in the pregnancies in the mid and high dose animals. While there were no pregnancies in the high dose animals, when the previously treated animals were maintained without treatment for four weeks and then mated, all the females became pregnant. Thus the antifertility effect is fully reversible.



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Neurotoxicity Can cause acute delayed neurotoxicity when administered orally to hens at > 1000 mg/kg

12. Ecological information

Aquatic toxicity :
- 96 Hour-LC50, Fish >1119 ug/l (Fathead minnow)
> 100 mg/l (Rainbow Trout)
- 48 Hour-EC50, Daphnia magna 60 ug/l
- EC50, Freshwater algae > 1011 ug/l (96 hr)
Biodegradation Not readily biodegradable.
Note: Does not meet the criteria for PBT or vPvB assessment

13. Disposal considerations

Waste disposal Liquid material should be incinerated. Material absorbed onto sand or earth should be disposed of as solid waste in accordance with local regulations.
Disposal of Packaging Empty packaging may contain product residues and due consideration should be given prior to disposal

14. Transportation information

UN No. 3082
DOT Proper shipping name: Environmentally hazardous substances, liquid , n.o.s (trixylenyl phosphate)
Class: 9 - Miscellaneous Hazardous Material
Label: 9
Packing Group: III

Not regulated for surface and air transport in non-bulk (<119 gallons) packagings. (contains trixylenyl phosphate which is a Marine Pollutant per 49CFR 172.101 Appendix B)



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IMDG Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (trixylenyl phosphate)
Class: 9 - Miscellaneous Dangerous Substances and Articles
Label: 9
Packing Group: III
Mark: MARINE POLLUTANT

ICAO/IATA Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (trixylenyl phosphate)
Class: 9
Hazard label(s): Miscellaneous
Packing group: III
Marking: Environmentally hazardous substance

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.

- California-Prop 65 This product does not contain any ingredient known to the State of California to cause cancer or reproductive toxicity as listed under the State drinking Water and Toxic Enforcement Act of 1986.

- Waste Classifications This material does not meet RCRA`s characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40CFR 261.33.

- Workplace Classification This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

Canada Listed in DSL

-WHMIS hazard class D2A Very toxic material causing other toxic effects

EU Reported in EINECS
Regulated in France - Possible work-related illnesses, Tables A and B (Code de la Sécurité Sociale, Section III, Annex A, Article D.461-1, July 1999)

Japan Listed in ENCS

Australia Listed in AICS

New Zealand Inventory Listed in NZIoC

China



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- **China inventory** Listed in IECSC

Korea Listed in ECL

Philippines Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
2, 4, 8, 9, 12

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

TO MEET THIS COMMITMENT WE WILL: 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

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

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ICL-IP America Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will ICL-IP America Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.**



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In an event of discrepancy between the contents of this SDS and the English version of it, the English version shall prevail.

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End of safety data sheet