

SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)
According to Canada WHMIS 2015

Product name	SYN-O-AD 8475	
Product id	7071SA	
Revision date	17/05/2017	Revision: 4
Supersedes	01/12/2013	

1. Identification of the substance & the company

Product identifier	SYN-O-AD 8475
Chemical name	Trixylyl phosphate
Synonym(s)	TXP; Phenol, dimethylphosphate (3:1). Trixylenyl phosphate.
Chemical formula	C24H27O4P
Chemical family	Aryl phosphate
Type of product and use	Lubricant Additive
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-group.com
Emergency Telephone	Chemtrec: (800) 424-9300 Medical: PROSAR 1-888-875-1685 (24HRS)

2. Hazards identification

GHS classification	Eye Irritant. 2B, H320 - Causes eye irritation Repr. 1B, H360 - May damage fertility or the unborn child (Testicular effects - sperm concentration, motility) STOT RE 2, H373 - May cause damage to adrenals, testes, epididymides, ovaries, liver (females only) through prolonged or repeated exposure Aquatic Acute 1, H400 - Very toxic to aquatic life Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects
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Signal Word DANGER

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Hazard statements	<p>H320 - Causes eye irritation H360 - May damage fertility or the unborn child (Testicular effects - sperm concentration, motility) H373 - May cause damage to adrenals, testes, epididymides, ovaries, liver (females only) through prolonged or repeated exposure H410 - Very toxic to aquatic life with long lasting effects</p>
Precautionary statements	<p>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 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P391 - Collect spillage P405 - Store locked up P501 - Dispose of contents/container in accordance with national and international regulations</p>
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.

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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	Korea OEL	OSHA (PEL) Data
Trixylyl phosphate 25155-23-1	Not determined	Not determined	Not determined

Ventilation requirements Provide adequate ventilation.

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
Flash point	>200°C
Vapor pressure	0.21 kPa (20°C) 0.27 kPa (25°C)
Density	1.142 (20°C)

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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

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
- Dermal irritation (rabbit)	Not irritant
- Eye irritation (rabbit)	Mild irritant.
Chronic toxicity	No data available
Mutagenicity	Not mutagenic by the Ames Test. Not clastogenic in chromosome aberration test with Chinese hamster ovary cells. Negative in sister chromatid exchange assay in mammalian cells (read across to structural analogue Tricresyl phosphate, CAS 1330-78-5)
Carcinogenicity	Not classified by IARC Not included in NTP 14th Report on Carcinogens Not classified as a carcinogen by USA OSHA

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Reproductive toxicity	May damage fertility. Specific effect: Testicular effects - Sperm concentration, motility.	
Specific Target Organ Toxicity (STOT) - Single exposure	No data available	
Specific Target Organ Toxicity (STOT) - Repeat exposure	May cause damage to organs through prolonged or repeated exposure. Affected organs: adrenals, testes, epididymides, ovaries, liver (females only)	

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)
- NOEC	0.033 mg/L (freshwater invertebrates)
Biodegradation	Not readily biodegradable.
Bioaccumulative potential	Not bioaccumulative

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
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DOT	<p>Proper shipping name: Environmentally hazardous substances, liquid , n.o.s (trixylenyl phosphate) Class: 9 - Miscellaneous Hazardous Materials Labels: 9 Packing Group: III</p> <p>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)</p>
IMDG	<p>Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (trixylenyl phosphate) Class: 9 - Miscellaneous Dangerous Substances and Articles Labels: 9 Packing Group: III Mark: MARINE POLLUTANT</p>
ICAO/IATA	<p>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</p>

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.
Canada	Listed in DSL
EU	Reported in EINECS
Australia	Listed in AICS
China	
- China inventory	Listed in IECSC

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Japan	Listed in ENCS Listed in ISHL
Korea	listed in KECI, KE-11768
New Zealand Inventory	Listed in NZIoC
Philippines	Listed in PICCS
Taiwan	Listed (TCSI)
Thailand	Listed

16. Other information

This data sheet contains changes from the previous version in section(s)
2, 4, 11, 12, 15

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

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End of safety data sheet