

MATERIAL SAFETY DATA SHEET

SJ Enterprises

FILE NO: 015

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NAME OF PRODUCT: Cyco XL

MSDS DATE:14/8/09

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Cyco XL

SYNONYMS: Superphosphoric Acid

PRODUCT CODES: 015

MANUFACTURER: SJ ENTERPRISES PTY LTD

DIVISION: N/A

ADDRESS: FACTORY 3&4 / 63 LANGFORD STREET, POORAKA, SOUTH AUSTRALIA. 5095

EMERGENCY PHONE: +61 8 8359 8732

CHEMTREC PHONE: N/A

OTHER CALLS: +61 0 430 217 040

FAX PHONE: +61 8 8359 8732

CHEMICAL NAME: Phosphoric acid

CHEMICAL FAMILY: Inorganic acid

CHEMICAL FORMULA: H₃PO₄

PRODUCT USE: Hydroponic Growth Stimulant

PREPARED BY:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Superphosphoric Acid

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABL</u>
H ₃ PO ₄	0.087%(w/v)		

	<u>ppm</u>	<u>mg/m3</u>
	0.087 x 10 ⁶	0.35 x 10 ⁶

SHA PEL-TWA: N/A

OSHA PEL STEL : N/A

OSHA PEL CEILING: N/A

ACGIH TLV-TWA: N/A

ACGIH TLV STEL: N/A

ACGIH TLV CEILING: N/A

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SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

POTENTIAL CHRONIC HEALTH EFFECTS:

Extremely dangerous in case of eye contact or skin contact. Corrosive to skin and eyes on contact. Skin contact may produce burns. Dangerous in case of ingestion or inhalation. Liquid or spray mist may produce tissue damage particularly to the eyes, the mucous membranes of the nose, mouth and respiratory tract. Inhalation of the spray mist may produce severe irritation of the respiratory tract, characterized by coughing, choking, or shortness of breath.

POTENTIAL ACUTE HEALTH EFFECTS:

Repeated inhalation of mists or vapours can produce varying degree of respiratory irritation or lung damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation or skin burns and ulcerations. Contains minor amounts of sulfuric acid (approximately 2%). Epidemiological studies of workers chronically exposed to sulfuric acid have suggested an increased risk for upper respiratory cancers. The International Agency for Research in Cancer has concluded that occupational exposure to strong inorganic acid mists containing sulphuric acid is carcinogenic to man, however, sulfuric acid itself is not considered a confirmed human carcinogen at this time. The epidemiological studies which provided the basis for the IARC assessment were confounded by exposure to alkyl sulphates (known animal carcinogens), other chemicals, and smoking. Based on the evidence from all human and animal studies, no definitive relationship has been shown between increased risk of respiratory tract cancer and sulfuric acid alone. Sulfuric acid can react with other substances to form mutagenic and possibly carcinogenic products such as alkyl sulfates.

ROUTES OF ENTRY:

EYES: Liquid or spray mist may produce tissue damage particularly to the eyes

SKIN: May cause severe skin irritation or skin burns and ulcerations

INGESTION: May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

INHALATION: Repeated inhalation of mists or vapours can produce varying degree of respiratory irritation or lung damage

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: No Data found

CARCINOGENICITY

OSHA: N/A

ACGIH: N/A

NTP: N/A

IARC: N/A

OTHER: N/A

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

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SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with water for 30 minutes or longer keeping eyelids open. Obtain immediate medical attention. Continue to flush eyes, if possible, while transporting to medical care.

SKIN: Immediately flush with water for a minimum of 30 minutes while removing contaminated clothing. Obtain immediate medical attention. Continue to flush, if possible, while being transported to medical care.

INGESTION: Do not induce vomiting. Quickly transport the person to an emergency care facility. Removal of the substance from the stomach must be done by medical personnel. If tolerated, give no more than 1 cup of milk or water (or 1/2 cup for children) to rinse the mouth and throat and dilute the stomach contents. If spontaneous vomiting does occur, lower the head so that the vomit will not re-enter the mouth and throat. Rinse mouth with water.

INHALATION:

MINOR INHALATION Inhalation of mist may produce irritation of respiratory tract. Loosen tight clothing. Allow to rest in a well ventilated area. Give artificial respiration if breathing has stopped. Obtain immediate medical attention.

MAJOR INHALATION In emergency situations use proper respiratory protection to evacuate affected individuals to a safe area as soon as possible. Loosen tight clothing around the person's neck and waist.

Oxygen may be administered if breathing is difficult. If the person is not breathing, perform artificial respiration. Obtain immediate medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Refer to MSDS

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% BY VOLUME) **LOWER:** N/A

FLASH POINT: N/A

F:

C:

METHOD USED: N/A

AUTOIGNITION TEMPERATURE: N/A

F:

C:

NFPA HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

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OTHER: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: N/A

FLAMMABILITY: N/A

REACTIVITY: N/A

PROTECTION:N/A

EXTINGUISHING MEDIA: Non-flammable. Material will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and combustible gases.

SPECIAL FIRE FIGHTING PROCEDURES: When phosphoric acid mists from hot fires may be encountered, self-contained breathing apparatus (SCBA) should be worn.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May react with iron or other metals to generate hydrogen gas, which may present an explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition it emits highly corrosive fumes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

SMALL SPILL: Absorb with an inert dry material and place in an appropriate waste disposal container. Neutralize the residue with sodium carbonate or crushed limestone.

LARGE SPILL: Corrosive liquid. Avoid contact with spilled material. Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Dike, if needed, to prevent entry into sewers, or confined areas. Call for assistance on disposal. Neutralize the residue with sodium carbonate or crushed limestone.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:

When unloading a rail car always open vent valve on top of rail car before opening dome and let sit an adequate amount of time to mitigate possible exposure to any off gas of chlorine. Always wear proper protective equipment. Avoid storage and/or transfer in tanks, lines and other equipment constructed or materials not specifically designed and approved for phosphoric acid service. Avoid freezing weather below 10F. Have adequate first aid water available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: N/A

VENTILATION : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

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RESPIRATORY PROTECTION: Approved respirators suitable for protection against acid mists and vapors. Not required for normal work procedures, but if misting occurs and always during unloading, use a high efficiency particulate respirator or self-contained breathing apparatus, with a full face shield when exposed above the TLV. Check with respirator manufacturer to determine the appropriate type of equipment for a given application.

EYE PROTECTION:Tight sealing splash proof goggles . Maintain eye wash fountain and quick-drench facilities in work area.

SKIN PROTECTION: Wear protective gloves and clean body-covering clothing.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: Please refer to State And Federal regulations

EXPOSURE GUIDELINES: No exposure guidelines have been set for this product.

SECTION 8 NOTES:PERSONAL PROTECTION IN CASE OF LARGE RELEASE EXPOSURE LIMITS

In the event of possible exposure to high concentrations of mists, or work which may require contact with liquid acid or acid residues, use a fully impervious EPA Level C chemical protective suit or better. The use of a full face piece respirator with P-100 filter cartridges is recommended to prevent overexposure by inhalation. For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 is in place.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Light Pink

ODOR: Odorless

PHYSICAL STATE: Liquid

pH AS SUPPLIED: 0.5 pH

pH (Other):

BOILING POINT:

F: 212

C: 100

MELTING POINT:

F: N/A

C: N/A

FREEZING POINT:

F: 32

C: 0

VAPOR PRESSURE (mmHg):

@

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F: N/A

C:

VAPOR DENSITY (AIR = 1): N/A

@

F:

C:

SPECIFIC GRAVITY (H₂O = 1): 8.817 x 10⁻³

@ room temperature

F: 77

C: 25

EVAPORATION RATE:

BASIS (=1):

SOLUBILITY IN WATER:

PERCENT SOLIDS BY WEIGHT:

PERCENT VOLATILE:

BY WT/ BY VOL @

F:

C:

VOLATILE ORGANIC COMPOUNDS (VOC):

WITH WATER:	LBS/GAL
WITHOUT WATER:	LBS/GAL

MOLECULAR WEIGHT: 97.994

VISCOSITY:

@

F:

C:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage

CONDITIONS TO AVOID (STABILITY): Avoid contact with strong alkalis or metals other than certain stainless steels.

INCOMPATIBILITY (MATERIAL TO AVOID): Reacts violently with strong alkalis producing heat. Contact with many metals may result in severe corrosion attack of the metal and liberation of hydrogen gas.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: High temperatures will liberate phosphorus oxides.

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HAZARDOUS POLYMERIZATION: No hazardous polymerization data found.

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute oral LD50: 1,530 mg/kg rat

Acute inhalation LC50: 61mg/m³ as P2O₅, guinea pig; 271mg/m³ as P2O₅, mouse; 1217mg/m³ as P2O₅, rat; 1689mg/m³ as P2O₅ as P2O₅, rabbit

Acute eye irritation, OECD 405 protocol: not irritating at <17% solution, severe irritation at higher concentrations

Acute dermal toxicity, LD50: >1,260 mg/kg, rabbit, 85% solution; >3,160 rabbit, 75% so In

Ecotoxicity:

Acute toxicity to fish, bluegill sunfish, 96hr LC50 = pH 3.0-3.5

Acute toxicity to invertebrates, Daphnia, 12 hr EC50 = pH 4.1-4.6

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

Ecotoxicity:

Corrosive to skin and eyes on contact. May cause burns to mouth, throat and stomach. May cause corneal opacity. May be harmful to fish, livestock, and wildlife.

Aquatic/Marine Toxicity: Harmful to fish and other water organisms if pH drops below 5.

Highly soluble. Will disperse with current. Release to watercourses may cause effects down stream from the point of release. Provides a source of phosphate nutrient which can promote algal growth in waterways. Rapid algal growth may result in eutrophication of waterways (oxygen depletion from decomposition of decaying plant matter), reducing the viability of waterways for other organisms. U.S. D.O.T.: This material is NOT listed as a Marine pollutant. Non-toxic for humans or animals.

Environmental Fate: No Data found

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

RCRA HAZARD CLASS: N/A

SECTION 13 NOTES:

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SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION Not Regulated

PROPER SHIPPING NAME: Proper Shipping Name: Phosphoric Acid
PIN #: UN1805 PGIII

HAZARD CLASS: TDG CLASS 8: Corrosive liquid.

ID NUMBER:

PACKING GROUP:

LABEL STATEMENT:

WATER TRANSPORTATION Not Regulated

PROPER SHIPPING NAME: Proper Shipping Name: Phosphoric Acid
PIN #: UN1805 PGIII

HAZARD CLASS: TDG CLASS 8: Corrosive liquid.

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

AIR TRANSPORTATION Not Regulated

PROPER SHIPPING NAME: Proper Shipping Name: Phosphoric Acid
PIN #: UN1805 PGIII

HAZARD CLASS: TDG CLASS 8: Corrosive liquid.

ID NUMBER:

PACKING GROUP:

LABEL STATEMENTS:

Special Provisions For Transport : A7,IB3,IP3,N34,T4,TP1

SECTION 15: REGULATORY INFORMATION

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): This product is on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

SARA TITLE III:

1. EHS (EXTREMELY HAZARDOUS SUBSTANCES) LIST: Not Listed

CERCLA HAZARDOUS SUBSTANCES and REPORTABLE QUANTITIES: Listed (EPA, 1996)

1. Statutory RQ (Reportable Quantity): 5000 pounds. The statutory source for designation of this hazardous substance under CERCLA is CWA Section 311(b)4.

2. Final RQ (Reportable Quantity): 5000 pounds (2270 kilograms); Final RQ Category: D

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The following substance is listed in SARA Section 313 and is to be reported:

Sulfuric acid, CAS # 7664-93-9, 2.5 wt%.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986 (CA Health and Safety Code Sec 25249.6):

This product contains the following chemical known to the State of California to cause cancer - strong inorganic acid mists containing sulfuric acid.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: Flash Point (Test Method): Non-flammable Flammable Limits LOWER UPPER Autoignition Temperature: Not applicable (% BY VOLUME) N/A N/A Hazard Rating (N.F.P.A.): Health: 2 Fire: 0 Reactivity: 0 Specific: Not applicable This N.F.P.A. rating is a recommendation by the manufacturer using the guidelines or published evaluations prepared by the National Fire Protection Association (N.F.P.A.).

PREPARATION INFORMATION: N/A

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