

SAFETY DATA SHEETS

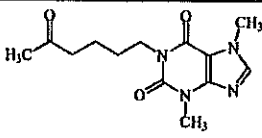
This SDS packet was issued with item:

078945234


N/A

Material Safety Data Sheet

Section 1. Product Identification and Uses

Common/Trade name	Pentoxifylline	DSL#	Not on the DSL list.
Synonyms	Oxpentifylline	CAS#	6493-05-6
Chemical name	1H-Purine-2,6-dione, 3,7-dihydro-3,7-dimethyl-1-(5-oxohexyl)-	Molecular weight	278.35 g/mole
Chemical family	Methylxanthine derivative	Chemical formula	C ₁₃ H ₁₈ N ₄ O ₅
Supplier	Plantex Ltd. Chemicals P.O.Box 1423 61013 Tel-Aviv Israeli Tel.# 03-9267267	Chemical structure	
Material uses	Pharmaceutical active ingredient. Therapeutic category: Vasodilator	Manufacturer	Teva Pharmaceutical Industries 5, Basel Street P.O. Box 3190, Petech Tikva, 49131 Israel
Emergency phone	(416)-749-9300 ext. 5555 For general information call ext. 8483 (8 AM-4 PM)	DIN	Not applicable.

Section 2. Hazards Identification

Potential Acute Health Effects	Possible eye, skin, gastrointestinal and/or respiratory tract irritation.
Potential Chronic Health Effects	Possible hypersensitization.
WHMIS	WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).
	
Remark	
Covered by Food & Drug Act and therefore not regulated under WHMIS	
Apotex Hazard Classification (For Apotex internal practices only)	This material has been assigned hazard class: 1

Section 3. First Aid Measures

Eye contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Take care not to rinse contaminated water into the non-affected eye. Always seek medical attention for accidents involving the eyes.
Skin contact	Flush the contact area with lukewarm running water.
Hazardous skin contact	Flush the contact area with lukewarm running water for at least 15 minutes. Remove contaminated clothing, taking care not to spread the chemical. Seek medical attention if irritation persists.
Slight inhalation	Allow the victim to rest in a well ventilated area. If symptoms persist, obtain medical advice.
Hazardous inhalation	Take proper precautions to ensure your own safety before attempting rescue. Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration (use protective mask with one-way valve), or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

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Slight ingestion May cause irritation. Flush out mouth with water.

Hazardous ingestion Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. If breathing has stopped, trained personnel should begin artificial respiration (use protective mask with one -way valve), or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.
Treatment should be symptomatic and supportive and may include the following:
1. Perform early gastric lavage and/or administer activated charcoal slurry. DO NOT induce vomiting.
2. Monitor and correct electrolyte abnormalities.
3. Treat seizures with intravenous benzodiazepines. If seizures recur, treat with phenobarbital or propofol. Monitor for hypotension, dysrhythmias, respiratory depression, and need for endotracheal intubation. Evaluate for hypoglycemia, electrolyte imbalances, and hypoxia.
4. For hypotension, administer isotonic fluid. If hypotension persists, treat with dopamine or norepinephrine.
5. Hemodialysis and hemoperfusion are unlikely to be effective. [Poisindex 2010]

Section 4. Hazardous Ingredients

Name	CAS #	% (w/w)
Pentoxifylline	6493-05-6	100
Toxicity values of the hazardous ingredients Refer to Sec. 11.		
TLV	Not established.	

Section 5. Fire Fighting Measures

The product is:	May be combustible.
Autoignition temperature	Not available.
Fire degradation products	Decomposition products may include the following materials: carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ etc.).
Flash points	Not applicable.
Flammable limits	Not available.
Fire extinguishing procedures	Extinguisher media: dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials. Special fire fighting procedures: As with all fires, evacuate personnel to safe area. Firefighters should use self-contained breathing equipment and protective clothing.
Flammability	Emits toxic fumes under fire conditions.
	Remark No additional remark.
Risks of explosion	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Fine airborne dust can be ignited by static discharge.
	Remark No additional remark.

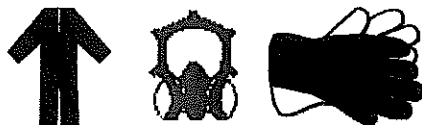
Section 6. Accidental Release Measures

Spill and leak Vacuum or sweep up spillage. Avoid dust. Place spillage into an appropriate labeled waste disposal container. Wash contaminated clothing before reuse. Ventilate area and wash spill site. Follow appropriate Safe Work Practices.

Protective Clothing Pictograms in case of large spill and/or high exposure levels

Protective clothing in case of large spill Full suit with hood, or disposable/washable coveralls. Full facepiece Air Purifying Respirator with combination particulate/organic vapour cartridge. Rubber gloves (impervious).

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Section 7. Handling and Storage

Precautions	Use with adequate dust control. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation, skin and eye contact. Wash thoroughly after handling.
Storage	Store in suitable labelled containers. Keep containers tightly closed when not in use and when empty. Protect from damage. Store in a cool, dry, well-ventilated area, out of direct sunlight. Ground drums and bond transfer containers.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Exposure to this material can be controlled in many ways. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. This general information can be used to help develop specific control measures. Ensure that control systems are properly designed and maintained. Comply with occupational, environmental, fire, and other applicable regulations. Engineering methods to control hazardous conditions are preferred. Methods include mechanical (local exhaust) ventilation, process or personnel enclosure and control of process conditions. Administrative controls and personal protective equipment may also be required. Supply sufficient replacement air to make up for air removed by exhaust system.
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Personal Protection	Splash goggles. Covering uniform. Half facepiece Air Purifying Respirator with combination particulate/organic vapour cartridge (less than 1 kg). Full facepiece Air Purifying Respirator with combination particulate/organic vapour cartridge (greater than 1 kg). Nitrile gloves (impervious). Chemical fume hood.
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Protective Clothing (Pictograms)



PERSONAL PROTECTIVE EQUIPMENT:

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment, including approved respiratory protection. Have appropriate equipment available for use in emergencies such as spills or fire. If respiratory protection is required, institute a complete respiratory protection program, including selection, fit testing, training, maintenance and inspection. Refer to the CSA Standard Z94, "Selection, Care, and Use of Respirators".

RESPIRATORY PROTECTION GUIDELINES:

Where Local Exhaust Ventilation (LEV) at dust generating process points exists, respiratory protection may not be required.

When working with quantities less than 1 kg and in the absence of Local Exhaust Ventilation (LEV) with dusty processes, a half facepiece Air Purifying Respirator with combination particulate/organic vapour cartridge or Filternd facepiece and goggles is recommended.

When working with quantities greater than 1 kg and in the absence of Local Exhaust Ventilation (LEV) with dusty processes, a Full facepiece Air Purifying Respirator with combination particulate/organic vapour cartridge is recommended.

The specific respirator selected must be based on contamination levels found in the work place, the specific operation and must not exceed the working limits of the respirator.

When performing cleaning activities refer to appropriate cleaning solution MSDS.

EYE/FACE PROTECTION: Splash goggles/safety glasses.

PROTECTIVE CLOTHING/SKIN PROTECTION: Glove selection must take into account any solvents and other hazards present. The selection of gloves for a specific activity must be based on the material's properties and on possible permeation and degradation that may occur under the circumstances of use. Potential allergic reactions can occur with certain glove materials (e.g. Latex) and therefore these should be avoided. Full environmental suit with hood, and/or other resistant protective clothing when working in dusty areas. Have a safety shower/eye-wash fountain readily available in the immediate work area.

EXPOSURE CONTROLS/PERSONAL PROTECTION COMMENTS: In the event clothing becomes contaminated, remove promptly. Launder before use. Inform laundry personnel of contaminant's hazards. Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping.

Section 9. Physical and Chemical Properties

Physical state and appearance	Crystalline powder	Odor	Odorless.
pH	Not available.	Taste	Bitter.
Odor threshold	Not available.	Color	White or almost white.
Volatility	Not available.		
Melting point/ Freezing point	104-105°C		
Boiling point	460°C (860°F)		
Specific gravity	Not available.		
Vapor density	Not available.		
Vapor pressure	Not available.		
Partition Coefficient:	n-octanol/water: 0.29		
Ionicity (surface active agent)	Not available.		
Critical temperature	Not available.		
Instability temperature	Not available.		
Conditions of instability	No additional remark.		
Dispersion properties	See solubility.		
Evaporation rate	Not available.		
Solubility	Soluble in water. Freely soluble in chloroform and in methanol; sparingly soluble in ethanol; slightly soluble in ether.		

Section 10. Stability and Reactivity

Stability	The product is stable.
Hazardous decomp. products	When heated to decomposition material emits toxic fumes of NOx. Emits toxic fumes under fire conditions.
Degradability	Not available.
Corrosivity	Not available.
	Remark No additional remark.
Reactivity/ Incompatibility	Protect from heat.
	Remark No additional remark.

Section 11. Toxicological Information

Routes of entry	Ingestion. Inhalation. Eye contact. Skin contact.
Toxicity data	RTECS#: XH2475000 TDLo: 80 mg/kg (oral-woman); affects pulse rate LD50: 1170 mg/kg (oral-rat) LD50: 1225 mg/kg (oral-mouse)

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Long-term effects

Possible hypersensitization.

Target organ: blood.

Carcinogenicity: Not listed by IARC, NTP, ACGIH, or OSHA.

Studies in rats given pentoxifylline at doses up to 24 times the maximum recommended human dose for 18 months, with a 6 month drug-free period, showed an increase in benign mammary fibroadenomas in females at the highest dose. Mice given the same dose for 18 months showed no evidence of carcinogenicity.

Reproductive Toxicity: Reproduction studies have been performed in rats, mice and rabbits at doses up to 23, 2 and 11 times the maximum recommended daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to pentoxifylline.

Teratogenicity: Category C. Studies in rats and rabbits given oral doses up to 576 and 264 mg/kg, respectively, found an increased incidence of fetal resorptions in rats given the highest dose, but no fetal malformations were observed. Intravenous doses up to 25 mg/kg in rabbits and 50 mg in mice caused no adverse fetal effects.

Mutagenicity: Pentoxifylline was negative in the Ames Salmonella typhimurium assay with and without activation and in the in vivo mouse micronucleus assay. It did not induce 6-TGr mutations in the HGPRT locus of V79 cells and did not cause morphological transformation of Syrian hamster embryo cells. It did induce chromosome aberrations and micronuclei in Chinese hamster V79 cells and human peripheral lymphocytes in vitro.

Remark

Medical conditions aggravated by exposure: Hypersensitivity to material, recent cerebral, retinal, or gastrointestinal bleeding, or any other condition in which there is a risk of bleeding; liver or kidney function impairment; cerebrovascular or coronary artery disease; hypotension. Individuals sensitive to methylxanthines such as caffeine, theophylline, or theobromine may be sensitive to this material also.

Short-term effects and Signs & Symptoms of overexposure

Possible eye, skin and/or respiratory tract irritation.

The usual oral adult dose of pentoxifylline is 400 mg three times a day.

Adverse effects may include irregular heart beat, flushing, abdominal discomfort, gas, diarrhea, heartburn, nausea, vomiting, agitation, dizziness, drowsiness, headache, trouble sleeping, and blurred vision. Possible allergic reaction to material if inhaled, ingested, or in contact with skin.

Overdose symptoms include gastrointestinal upset, flushing, lightheadedness, convulsions, drowsiness, fever, agitation, abnormal heart rate, and loss of consciousness. Symptoms usually occur 4 to 5 hours following ingestion and last about 12 hours.

Remark

The above adverse effects are based on clinical studies.

Section 12. Ecological Information

Ecological Information Not available.

Section 13. Disposal Considerations**Waste Disposal**

For internal Apotex waste disposal: Collect in sealed containers and place in appropriate labeled pharmaceutical solid waste class 261N.

For external waste disposal: Follow all appropriate safe work procedures and federal, provincial and local regulations for disposal. Use only licensed disposal and waste hauling companies.

Section 14. Transport Information TDG, IATA, IMDG

Not controlled under TDG (Canada).

UN

Not applicable (PIN and PG).

Special Provisions for Transport

Not applicable.

Section 15. Other Regulatory Information and Pictograms

****NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX****

NFPA-HEALTH-blue :1-Slightly hazardous to health.

NFPA-FLAMMABILITY-red :1-Materials that must be preheated before ignition can occur.

NFPA-REACTIVITY-yellow :0-Normally stable.

National Fire
Protection
Association (U.S.A.)

Health



Fire Hazard
Reactivity
Specific Hazard

Hazardous Material
Information System
(U.S.A.)

Fire Hazard	1
Reactivity	0
Personal Protection	X

* - Chronic hazard indicator
X - See Section 8

HCS (Hazardous Communication System)
(OSHA, U.S.A.)

Class: Harmful.

DOT (Department of
Transportation)
(U.S.A) (Pictograms)

Not a DOT controlled material (United States).

EU Classification and
Labelling

R22- Harmful if ingested. R36/37/38- Irritating to eyes, respiratory system and skin. R40- Possible risks of irreversible effects. S36- Wear suitable protective clothing.



ADR (European
Agreement
of Dangerous goods by
Road)
(Pictograms)

Not controlled under ADR (Europe).

Other Regulations

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

Section 16. Other Information

References

HSBD & RTECS Database
The Merck Index
PDR Electronic Library
Teratogenic Effects of Drugs A Resource for Clinicians

MSDS:

U. S. Pharmacopela

Validation date:
(year.month)

July 29, 2010

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