Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Section 1: Identification

Product Name TRETINOIN USP
Commercial Name Not available.
Product Use Not available
Restrictions On Use Not available

Product Code 30-1270

Company
PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: CFR 1910.1200 Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2A Reproductive toxicity Category 1

Signal Word DANGER

Hazard Statement(s) Causes skin irritation. Causes serious eye irritation. May damage fertility or the unborn child.

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components {all-trans} Retinoic acid
% By Weight 100
CAS# 302-79-4
Molecular Weight 300.44 g/mole
Chemical Formula C20H28O2
Synonym(s) Tretinoin Vitamin A acid All-trans-Retinoic acid

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
{all-trans-}Retinoic acid	302-79-4	100	Not available.	ORAL (LD50):Acute: 2200mg/kg [Mouse].1960 mg/kg[Rat].

Section 4: First-Aid Measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin Contact Rinse skin with water/shower. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.

Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Symptoms/Effects

Acute Pharmacologically active material. Occupational exposure may cause physiological effects.

Delayed Pharmacologically active material. Occupational exposure may cause physiological effects.

Immediate Medical Attention

Provide general supportive measures and treat symptomatically. Administer activated charcoal as a slurry. Perform gastric lavage. Control any seizures first. For retinoic acid syndrome, administer dexamethasone intravenously. Monitor for hypertension. For severe hypertension, nitroprusside is preferred; labetalol, nitroglycerin, and phentolamine are alternatives.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media

Water. Foam. Dry chemical or CO2. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media

Not available.

Products of Combustion

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

Firefighters Special Equipment and Precautions

Wear suitable protective equipment. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS. Methods and materials for containment and cleaning up: For waste disposal, see section 13 of the SDS. Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination. Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Handling: As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Combustible dust clouds may be created where operations produce fine material (dust). Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential. Storage: Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

Section 8: Exposure Controls/Personal Protection

Exposure Limits The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits. TWA 0.001 mg/m3

Engineering Controls	For laboratory operations, use local exhaust ventilation or a ventilated enclosure for high energy operations such as particle sizing. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred
Personal Protection	Eye/face protection: Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available. Skin protection Hand protection: Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. Other: Train employees in proper gowning and degowning practices. Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. Respiratory protection: Respirators are generally not required for laboratory operations. Use a tight-fitting full-face respirator with HEPA filters for spill cleanup. Chose respiratory protection appropriate to the task and the level of existing engineering controls. Thermal hazards: Wear appropriate thermal protective clothing, when necessary. General hygiene considerations: Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment.

Section 9: Physical and Chemical Properties

Appearance	Solid. Powder Color : Yellow
Odor	Odorless
Odor Threshold	Not available

Melting Point	356 - 359.6 °F (180 - 182 °C)	**pH**	in aqueous solution 8.2
Freezing Point	Not available	**Vapor Pressure**	< 0.0000001 kPa at 25 °C
Boiling Point/Range	Not available	**Vapor Density**	Not available.
Decomposition temperature	Not available	**Viscosity**	Not available.
Partition Coefficient: n-octanol/water	6.3	**Evaporation Rate**	Not available
Flash Point	Not available.	**Autoignition temperature**	509 °F (265 °C)
Flammability	Not available	**Flammability or Explosive Limits:**	
		Lower	Not available
		Upper	Not available

Solubility(ies)	Insoluble in water.
Other	Alcohol: Slightly soluble. Chloroform: Slightly soluble. Ether: Sparingly soluble. Methylene chloride: Soluble Chemical family Retinoid. Dust explosion properties Minimum ignition energy (MIE) - dust cloud 3 - 10 mJ Molecular formula C20H28O2 Molecular weight 300.44

Section 10: Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical Stability	Material is stable under normal conditions.
Hazardous Polymerization	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	Contact with incompatible materials
Incompatible Materials	Strong oxidizing agents. Acids
Hazardous Decomposition Products	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions

Section 11: Toxicological Information

RTECS VH6475000

Acute Toxicity
Oral LD50 Mouse 1100 mg/kg Rat 8000 mg/kg, 2000 mg/kg

Skin Corrosion/Irritation
Causes skin irritation.

Serious Eye Damage/Irritation
Causes serious eye irritation

Respiratory or Skin Sensitization
Not available

Germ Cell Mutagenicity
Not available

Carcinogenicity
Not listed

Reproductive Toxicity
May damage fertility or the unborn child. Retinoids have caused fetal harm resulting in craniofacial cardiovascular, and central nervous system defects

Routes of Entry
Skin. Eye.

Symptoms Related to Exposure
Rash. Fever. Weakness. Fatigue. Fast heartbeat. Irregular breathing. Shortness of breath. Dry mouth. Dry skin. Bone pain. Mouth sores. Itching. Sweating. Visual disturbances. Hearing problems. Hair loss. Flushing. Dizziness. Depression. Gastrointestinal disturbances.

Potential Health Effects
Not available.

Target Organ(s) Not available

Section 12: Ecological Information

Ecotoxicity
Aquatic Chronic Crustacea EC50 Daphnia magna 3.1 mg/l, 48 hours

Persistance and Degradability
Not available

Bioaccumulative Potential
Octanol/water partition coefficient log Kow 6.3

Mobility in Soil
Not available

Other Adverse Effects
Not available

Section 13: Disposal Considerations

Waste Disposal
Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions)

Disposal of Container
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Other Considerations
Not available

Section 14: Transport Information

DOT Classification
DOT UN number: UN3077 UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Tretinoin) Transport hazard class(es) Class 9 Subsidiary risk - Packing group III

Section 15: Regulatory Information

Regulations

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated. CERCLA Hazardous Substance List (40 CFR 302.4) Not listed. SARA 304 Emergency release notification Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated Superfund Amendments and Reauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Hazard categories SARA 302 Extremely hazardous substance Not listed. YesSARA 311/312 Hazardous chemical SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Not regulated.Safe Drinking Water Act (SDWA) US state regulations US - California Proposition 65 - CRT: Listed date/Developmental toxin Tretinoin (CAS 302-79-4) Listed: January 1, 1989 US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a)) Tretinoin (CAS 302-79-4)

Other

Not available.

Section 16: Other Information

Not available.