Safety Data Sheet

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

Section 1: Identification

Product Name Quinine Sulfate USP Dihydrate
Commercial Name Not available.
Product Use Used against leg cramps, malaria
Restrictions On Use Not available

Product Code 30-1588

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 Acute toxicity (oral), Category 4 Sensitisation, respiratory Category 1 Sensitisation - Skin, Cateogry 1

Signal Word WARNING

Hazard Statement(s) Harmful if swallowed. May cause an allergic skin reaction.

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. In case of inadequate ventilation wear respiratory protection.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor.

Storage Not available.

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

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Quinine Sulfate Dihydrate
% By Weight 100
CAS# 6119-70-6
Molecular Weight 782.95 g/mole
Chemical Formula (C20H24N2O2)2.H2SO4.2H2O
Synonym(s) 6'Methoxycinchonan-9-ol sulfate

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Quinine Sulfate Dihydrate	6119-70-6	100	Not available	Not available

Section 4: First-Aid Measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Do not use mouth-to-mouth method if the substance is inhaled. Oxygen or artificial respiration if needed. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Skin Contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions

Eye Contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell

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

Treat symptomatically. Treatment of quinine overdose may include the following: DO NOT induced vomiting. Administer multi-dose activated charcoal as a slurry. Perform gastric lavage soon after ingestion (within one hour). Protect airway by placement in Trendelenburg and left lateral decubitus position or by endotracheal intubation. Control any seizures first. Monitor plasma and serum potassium levels. If refractory arrhythmia develops, assess calcium and magnesium. For seizures, administer intravenous diazepam or lorazepam. If seizures recur, consider phenobarbital. Monitor for hypotension, dysrhythmias, respiratory depression, and need for endotracheal intubation. Evaluate for hypoglycemia, electrolyte disturbances, and hypoxia. To decrease cardiac toxicity, administer sodium bicarbonate. Repeat doses may be needed. To control arrhythmias, administer phenytoin or lidocaine (group II antiarrhythmics). Phenytoin is preferred. DO NOT use procainamide or disopyramide. For torsades de pointes in hemodynamically unstable patients, treat with cardioversion. In stable patients, treat with magnesium, isoproterenol, and/or atrial overdrive pacing. Correct electrolyte abnormalities. AVOID class Ia (quinidine, disopyramide, procainamide, aprindine) and most class III antidysrhythmics (N-acetylprocainamide, sotalol). For refractory bradycardia or heart block (markedly prolonged conduction, Mobitz II block, and 3rd degree heart block) that compromises blood pressure, treat with temporary pacemaker insertion. To manage blood pressure, administer catecholamines. Forced diuresis, hemodialysis, charcoal column hemoperfusion, and plasma exchange were not found to be effective in increasing quinine elimination.

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

No unusual fire or explosion hazards noted

Firefighters Special Equipment and Precautions

Wear suitable protective equipment. Use water spray to cool unopened containers. 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

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Methods and materials for containment and cleaning up: 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. 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	Not available.
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. Choose 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 (powdered solid) Color: White
Odor	Odorless
Odor Threshold	Not available

Melting Point	401 °F (205 °C) (decompose	**pH**	in aqueous solution 6.2
Freezing Point	Not available	**Vapor Pressure**	Not applicable.
Boiling Point/Range	Decomposes	**Vapor Density**	Not available.
Decomposition temperature	Not available	**Viscosity**	Not available.
Partition Coefficient: n-octanol/water	Not available	**Evaporation Rate**	Not avaialble
Flash Point	Not applicable.	**Autoignition temperature**	Not available
Flammability	Not available	**Flammability or Explosive Limits:**	
		Lower	Not available
		Upper	Not available

Solubility(ies)	Slightly soluble in water.
Other	Methanol: Soluble. Alcohol: Slightly soluble. Chloroform: Slightly soluble. Ether: Very slightly soluble. Chemical family Quinoline derivative; cinchona alkaloid. Molecular formula (C20H24N2O2)2 . H2SO4 . 2H2O Molecular weight 782.94

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	Ammonia. Alkalis. Iodine. Strong oxidizing agents.
Hazardous Decomposition Products	NOx. SOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions

Section 11: Toxicological Information

RTECS VA8440000

Acute Toxicity
Harmful if swallowed. A related material showed oral toxicity in animals.

Skin Corrosion/Irritation
May cause an allergic skin reaction. May cause an allergic skin reaction. Quinine and its derivatives have been reported to cause photosensitivity, erythema multiforme and skin rashes, including urticaria.

Serious Eye Damage/Irritation
Not available

Respiratory or Skin Sensitization
May cause allergy or asthma symptoms or breathing difficulties if inhaled. Quinine and its derivatives may cause anaphylactic shock, asthma, or worsen symptoms in patients with asthma

Germ Cell Mutagenicity
Not available

Carcinogenicity
Not available

Reproductive Toxicity
Not available

Routes of Entry
Inhalation. Skin. Ingestion.

Symptoms Related to Exposure
Cinchona alkaloids: Skin rash. Gastrointestinal disturbances. Blurred vision. Impaired vision. Ringing in ears. Hearing loss. Seizures. Flu-like symptoms

Potential Health Effects
Not available.

Target Organ(s) Not available

Section 12: Ecological Information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistance and Degradability
No information available

Bioaccumulative Potential
No information available

Mobility in Soil
No information available

Other Adverse Effects
No information 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.

Disposal of Container
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner

Other Considerations
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

DOT Classification
DOT Not regulated as dangerous goods

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 1910.1001-1052) Not regulated. SARA 302 Extremely hazardous substance Superfund Amendments and Reauthorization Act of 1986 (SARA) Not listed. YesSARA 311/312 Hazardous chemical Acute toxicity (any route of exposure) Respiratory or skin sensitization Classified hazard categories 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 California Proposition 65 California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

Other
Not available.

Section 16: Other Information

Not available.