



Section 1. Product and Company Identification

Product Name Potassium Hexatitanate
CAS Number 12056-51-8

Parchem - fine & specialty chemicals

415 Huguenot Street
New Rochelle, NY 10801

(914) 654-6800 **(914) 654-6899**

parchem.com **info@parchem.com**

EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification

Physical and Chemical hazards

Flammable solids: Not classified.

Oxidizing solids: Classification not possible.

Corrosive to metals: Classification not possible.

Health hazards

Acute toxicity (oral): Not classified.

Acute toxicity (dermal): Classification not possible.

Acute toxicity (inhalation): Classification not possible.

Skin corrosion/irritation: Not classified.

Serious eye damage/eye irritation: Not classified.

Sensitization, skin: Classification not possible.

Sensitization, respiratory: Classification not possible.

Germ cell mutagenicity: Classification not possible.

Carcinogenicity: Classification not possible.

Reproductive toxicity: Classification not possible.

Specific target organ systemic toxicity

Single exposure: Classification not possible.

Repeated exposure: Category 2 (Inhalation: lung)

Aspiration toxicity: Classification not possible.

Environmental hazards

Hazardous to the aquatic environment

Acute: Classification not possible.

Chronic: Classification not possible.

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Health hazard statements

May cause damage to lung through prolonged or repeated exposure.

Precautionary statements

Prevention

Do not breathe dust/fume.

Response

Get medical advice/attention if you feel unwell.

Disposal

Dispose of contents/container to in accordance with local regulations in your country.

Adverse human health effects: May cause eye irritation if get dust into eyes. May irritate to the skin in susceptible individuals. Prolonged or repeated inhalation exposure to excessive concentrations of dusts may cause adverse effects to lung.

Section 3. Composition / Information on Ingredients

Common Name	Potassium Hexatitanate
CAS Number	12056-51-8

Section 4. First Aid Measures

Inhalation: If large amounts of fibers are inhaled and pulmonary symptoms develop (coughing, wheezing, shortness of breath), remove from exposure area to fresh air immediately. If breathing is difficult, provide oxygen, and get medical attention immediately.

Skin contact: If fibers irritate the skin, wash the skin with water first then wash with soap and water.

Eye contact: If fibers irritate eyes, flush eyes with copious quantities of water. If eye irritation continues, get medical attention immediately.

Ingestion: Have victim rinse mouth with water. If large amounts are swallowed, have victim drink 240 – 300 ml of water. Get medical attention if necessary.



Section 5. Firefighting Measures

Extinguishing Media: Use extinguishing media appropriate to the kind of fire and its surrounding area.

Specific Hazards with regard to Firefighting Measures: None expected

Specific firefighting measures: Not applicable.

Protection of firefighters: Wear self-contained breathing apparatus and appropriate protective equipment.

Section 6. Accidental Release Measures

Measures for Handling Personnel: Wear respirator and appropriate personal protective equipment (refer to Section 8) during clean up. Avoid breathing dust.

Measures for environmental effects: Avoid generation of dust.

Measures when handling spilled substances: Use vacuum cleaners with high efficiency particulate air (HEPA) filters instead of air jets to clean equipment. Do not dry sweep. To minimize dust generation, wet down spillage with low velocity water mist spray. Use high-efficiency particulate air (HEPA) filter equipped central or portable vacuum cleaner and place materials in sealed solid waste containers

Section 7. Handling and Storage

Handling

Preventive measures:

(Exposure Control for handling personnel)

Respirable fibers can be released and become airborne in processes of weighing, mixing, milling, bagging and handling. Use engineering controls such as isolation, enclosures, exhaust ventilation, wetting, and dust collection.

Exhaust ventilation should be designed and installed so that, as far as reasonably practicable, exhaust air is properly filtered and is not re-circulated into a workplace unless it has been effectively filtered.

Avoid breathing dust.

Respiratory protection must be used to prevent breathing respirable fibers.

Wear appropriate personal protective equipment (refer to Section 8).

Storage:

Recommendation for storage: Store this product separated from other materials in a usual warehouse

Section 8. Exposure Controls / Personal Protection

Engineering measures: Use engineering controls such as isolation, enclosures, exhaust ventilation, wetting, and dust collection to control airborne respirable fiber concentrations. These concentrations must be below the occupational exposure limits mentioned below. Exhaust ventilation



should be designed and installed so that, as far as reasonably practicable, exhaust air is properly filtered and is not re-circulated into a workplace unless it has been effectively filtered.

Adopted value: Threshold limit value for this product has not been established by ACGIH (American Conference of Governmental Industrial Hygienists) 1).

Exposure limits in European countries vary from 0.25 fibers/ml in Germany and Switzerland, to 1 fiber/ml in France and 5mg/m³ (total inhalable fraction) or 2 fibers/ml in U.K., while some countries have no established exposure limits.

Based upon existing research, the manufacturer generally recommends that workplace exposure for fibrous dust of Potassium hexatitanate be kept below 1 fiber/ml, except in countries which require lower exposure limits which are specifically set out above.

Personal protective equipment

Respiratory protection: Respiratory protection must be used to avoid breathing respirable fibers. Wear respirator which is approved or made according to a standard approved by the relevant national body for health and safety, and which shall reduce the concentration of fibers inhaled by the employee below the occupational exposure limits mentioned above.

Hand protection: Wear gloves to prevent skin contact.

Eye protection: Wear safety glasses or coverall goggles.

Skin and body protection: Wear loosely fitting, long-sleeved clothing to prevent repeated skin contact.

Safety and Health measures: Use vacuum cleaners with high-efficiency particulate air (HEPA) filters instead of air jets to clean equipment.

Work clothes and other clothes should be kept separately to prevent contamination.

Wash all work clothes separately from other clothing.

Wash thoroughly after handling

Rinse washing machine thoroughly.

Section 9. Physical and Chemical Properties

Physical properties

Appearance: Powder

Color: White

Odor: Odorless

pH: 6.0 - 8.0 (1% slurry)

Boiling point: Not determined

Melting point/Freezing point: 1300 - 1350°C

Decomposition temperature: Not applicable

Flash point: Not applicable

Ignition temperature: Not applicable

Explosion: None

Vapor pressure: Not applicable

Vapor density: Not applicable

Specific gravity/Density: Specific gravity is 3.4 - 3.6

Solubility in water: Insoluble

Octanol/water partition coefficient (log Pow): Not applicable (insoluble in water)



Section 10. Stability and Reactivity

Stability: This product is stable under normal conditions of handling and storage.

Conditions to avoid: Conditions which may cause a dangerous reaction are not known.

Incompatible materials: Materials which may cause dangerous reaction are not known.

Hazardous decomposition products: No information is available.

Section 11. Toxicological Information

Acute toxicity: Short-term harmful effects are not expected from skin contact, inhalation or swallowing.

LD50 (oral): > 5000 mg/kg (rats)

Skin corrosion/irritation

Primary skin irritation: Negative (rabbits)

Serious eye damage/eye irritation

Primary eye irritation: Very slight irritant (rabbits)

Carcinogenicity

IARC: Regarding carcinogenicity, IARC (the International Agency for Research on Cancer) classified the family of ceramic fibers, which contains potassium titanate fibers, in group 2B as possibly carcinogenic to humans in 1982 (Group 2B: "There is sufficient evidence for the carcinogenicity of ceramic fibers in experimental animals; no data available on the carcinogenicity of ceramic fiber to humans").

In 2001, IARC re-evaluated Man Made Vitreous Fibers (MMVF).

In IARC Monographs Volume 813 (2002), there was no category for the crystalline ceramic fibers in any Classified Groups, since the crystalline fibers had not been evaluated in the latest meeting.

Specific target organ systemic toxicity

Repeated exposure: Prolonged or repeated inhalation exposure to excessive concentrations of dusts may cause adverse effects to lung.

Animal toxicity data: In a two-year chronic inhalation study, there was no increase in the incidence of primary tumors of lung or upper respiratory tract in Potassium hexatitanate exposure groups. 6)4)

Exposure to a high concentration (200 WHO fibers/cc) of Potassium hexatitanate fibers was associated with alveolar and visceral pleural fibrosis 1).

Note: WHO fibers are particles with a ratio of length to diameter greater than 3:1 and which are longer than 5µm and have a diameter less than 3µm.

Human exposure data: Health hazard evaluations were conducted on 27 workers who had one to 15 years exposure to Potassium hexatitanate fibers at various production sites. In conjunction with this study, airborne fiber concentrations along with fiber sizing were evaluated at work places. There were no exposure-related abnormal chest X-ray findings or respiratory symptoms. Airborne concentrations were measured at weighing and bagging places in the Potassium hexatitanate production site. The first measurement of the Potassium hexatitanate fiber concentrations at the site



was 0.02 - 0.27 fibers/cc in 0.16 – 0.28mg/m³ of mass concentration, and the second measurement was 0.04 – 2.0 fibers/cc in 0.11 – 0.27mg/m³ of mass concentration. Airborne concentrations at the milling site showed 2.9 fibers/cc in 0.85mg/m³ of mass concentration.

Section 12. Ecological Information

No information is available.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

UN Number: Not applicable.

UN Class: Not applicable

Specific safety measures and conditions on transport: The cautions which should be taken during transportation are same as the cautions mentioned in section 7. In case of accidental release or fire during transportation, see the instructions given in sections 5, 6, 7, and 8 above.

Section 15. Regulatory Information

Other Regulatory Information: Follow all regulations in your country.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

REVISION DATE: 7/27/2016