

MATERIAL SAFETY DATA SHEET



TITAN BIOTECH LIMITED

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POTASSIUM IODIDE, AR GRADE

Section 1: Chemical Product Identification

Product Name: POTASSIUM IODIDE.
Product Code: 634.
CAS#: 7681-11-0.
Synonym: Not Available.
Chemical Name: Potassium Iodide.
Chemical Formula: KI.
Formula Weight: 166.00.

Section 2: Composition and Information on Ingredients

Composition:
Name: Potassium Iodide.
Toxicological Data on Ingredients:
H302, R22, Harmful if swallowed.
H315, R38, Causes skin irritation.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not Available.
MUTAGENIC EFFECTS: Not Available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not Available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact: Flush eyes with water as a precaution.
Skin Contact: Wash off with soap and plenty of water.
Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Serious Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion: Not Available.



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Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not Applicable.

Flash Points: Not Applicable.

Flammable Limits: Not Applicable.

Products of Combustion: Hydrogen iodide, Potassium oxides.

Fire Hazards in Presence of Various Substances: Not Applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Explosive in presence of organic materials, of metals.

Fire Fighting Media and Instructions:

SMALL FIRE: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

LARGE FIRE: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Remarks on Fire Hazards: Not Available.

Special Remarks on Explosion Hazards: Potassium iodide + Fluorine Perchlorate will explode on contact.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions: Do not breathe dust. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents, reducing agents, metals, acids, moisture.

Storage: Moisture Sensitive. Light Sensitive. Air Sensitive. Keep container tightly closed in light-resistant containers. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses, Lab coat, Dust respirator, Gloves. Be sure to use an approved/certified respirator or equivalent.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not Available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid, crystalline powder.

Odor: Odourless.

Taste: Bitter, strong saline.

Molecular Weight: 166.00.

Color: White.

pH: Not Available.

Boiling Point: 1330 °C.

Melting Point: 681 °C.

Critical Temperature: Not Available.

Relative Density: ca. 3.13.

Vapor Pressure: Not Available.



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Vapor Density: Not Available.

Volatility: Not Available.

Odor Threshold: Not Available.

Water/Oil Dist. Coeff.: Not Available.

Ionicity (in Water): Not Available.

Dispersion Properties: Not Available

Solubility: Very Soluble in water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Light, moisture, incompatible materials. It is stable under ordinary conditions of use and storage. On long exposure to air, it becomes yellow due to release of iodine.

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, organic materials, metals, acids.

Corrosivity: Non-corrosive in presence of stainless steel(304), of stainless steel(316).

Special Remarks on Reactivity: Reacts violently with strong oxidizers, bromotrifluorides, chlorotrifluorides, fluorine perchlorate, metallic salts. Attacks metals in moist environments. Also incompatible with salts of alkaloids, chloral hydrate, calomel (mercurous chloride), potassium chlorate, tartaric and other acids, oxidants, diazonium salts, charcoal, ozone, strong reducers, alkali metals, metals (brass, aluminum magnesium, zinc, cadmium, copper, tin, nickel, steel), metallic salts, organic materials, light.

Special Remarks on Corrosivity: Corrosive in all concentrations to most metals, except stainless steel, bronze, copper, titanium, and tantalum. Very minor corrosive effect on aluminum metal.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation, Ingestion.

Toxicity to Animals:

LD₅₀: Oral – mouse – 1.000 mg/kg

Chronic Effects on Humans: May cause damage to thyroid.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: LDL [Mouse] - Route: Oral; Dose: 1862 mg/kg

LDL[Rabbit] - Route: Oral; Dose: 916 mg/kg.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects and birth defects based on animal data. May affect genetic material based on animal data.

Special Remarks on other Toxic Effects on Humans: Causes gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect behavior (somnolence, muscle weakness), respiration (dyspnea). Serum-sickness type of hypersensitivity such as fever, arthralgia, lymph node enlargement, and eosinophilia may appear. Thrombotic thrombocytopenic purpura, and fatal periarteritis nodosa attributed to hypersensitivity to iodide has been described. Chronic Potential Health Effects: Can lead to iodism characterized by salivation, nasal discharge, sneezing, conjunctivitis, fever, headache, laryngitis, bronchitis, stomatitis, parotitis, anemia, and skin rashes. Chronic ingestion may also affect metabolism (anorexia), and thyroid gland (hypothyroidism, goiter). Furthermore, chronic ingestion of iodides (in animals) during pregnancy has resulted in fetal deaths, severe goiter and cretinoid appearance of the newborn.

Section 12: Ecological Information

Ecotoxicity:

LC₅₀: Oncorhynchus mykiss (rainbow trout) – 2190 mg/l – 96 h

EC₅₀: Daphnia – 2.7 mg/l – 24 h.

BOD and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not Available.



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Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not Applicable.

Special Provisions for Transport: Not Applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Potassium Iodide.

Other Regulations: Not available.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): This product is not classified according to the EU regulations.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

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

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard: Not Available.

Protective Equipment: Gloves, Lab coat, Safety glasses, Dust respirator - be sure to use an approved/certified respirator or equivalent.

Section 16: Other Information

References: Full text of H AND R-Statements.

H302, R22 – Harmful if swallowed.

H315, R38 – Causes skin irritation.

Other Special Considerations: Not available.

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