

# MATERIAL SAFETY DATA SHEET

## Potassium iodate

### SECTION 1 : PRODUCT AND COMPANY INFORMATION

Product Name : Potassium Iodate

Company Name : M/S Proto Chemical Industries.  
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Maharashtra. India.

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Synonym : Iodic Acid, potassium salt

Chemical formula :  $KIO_3$

### SECTION 2 : COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS #	E.C. #	Weight%
Potassium Iodate	7758-05-6	231-831-9	100 %

Toxicological Data on ingredients: Potassium Iodate LD50: Not available. LC50: Not available.

### SECTION 3 : HAZARDOUS IDENTIFICATION

**Potential acute health effect** :

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

**Potential Chronic Health effects** :

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

### SECTION 4 : FIRST AID MEASURES

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious skin contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation :**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek 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.

## SECTION 5 : FIRE FIGHTING MEASURES

<b>Flammability of the Product:.</b>	:	Non-Flamable.
<b>Flash Points</b>	:	Not applicable.
<b>Flammable Limits</b>	:	Not applicable.
<b>Products of Combustion:</b>	:	Not available.
<b>Fire Hazards in Presence of Various Substances</b>	:	combustible materia
<b>Explosion Hazards in Presence of Various Substances</b>	:	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of metals.
<b>Fire Fighting Media and Instructions:</b>	:	Not applicable.
<b>Special Remarks on Fire Hazards:</b>	:	It is an oxidizer. It can start a fire in presence of combustible or flammable materials When heated to decomposition it emits very

toxic fumes.

**Special Remarks on Explosion Hazards:** : Potentially explosive reaction with charcoal + ozone; metals; arsenic; carbon; phosphorus; sulfur; alkali metal hydrides; alkaline earth metal hydrides; antimony sulfide; arsenic sulfide; tin sulfide; metal cyanides; metal thiocyanates; manganese dioxide.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

### **Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

### **Large Spill:**

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

## SECTION 7 : HANDLING AND STORAGE

### **Precautions:**

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials.

### **Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

## 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:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### **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. (Crystals solid. Crystalline powder..)

Odour	: Odourless.		
Taste	: Not available	Specific Gravity	: Not available
Molecular Weight	: 214.0g/mole	Vapor Pressure	: Not applicable
Colour	: Not available	Vapor Density	: Not available
pH (1% soln./water)	: Not available	Volatility	: Not available
Boiling Point	: Not available	Odor Threshold	: Not available
Melting Point	: 560°C(1040°F)	Water/Oil Dist. Coeff	: Not available
Critical Temperature	: Not available	Ionicity (in water)	: Not available
Dispersion Properties	: See solubility in water.		

Solubility :

Soluble in cold water, hot water. Solubility in water @ 0 C: 4.74/100 ml Solubility in water @ 25 C: 9.16 g/100 ml  
Solubility in water at 100 C: 32.3 g/100 ml Insoluble in alcohol, nitric acid. Soluble in potassium iodide, dilute sulfuric acid.

**SECTION 10 : STABILITY AND REACTIVITY**

Stability	: The product is stable
Instability Temperature	: Not available
Conditions of Instability :	: Incompatible materials, ignition sources, dust generation
Incompatibility with various substances :	: Reactive with reducing agents, combustible materials, organic materials, metals.
Corrosivity	: Non-corrosive in presence of glass.
Special Remarks on Reactivity	: It can react vigorously with reducing materials. Violent reaction with organic matter. Incompatible with charcoal + ozone; metals; arsenic; carbon; phosphorus; sulfur; alkali metal hydrides; alkaline earth metal hydrides; sulfides (antimony sulfide; arsenic sulfide; copper sulfide; tin sulfide); metal cyanides; metal thiocyanates; manganese dioxide, hydrogen peroxide. Strong oxidizing characteristics appear when mixed with acid solutions.
Special Remarks on Corrosivity	: Not available
Polymerization	: Will Not occur.

**SECTION 11 : TOXICOLOGICAL INFORMATION**

**Routes of Entry :**

Inhalation. Ingestion.

**Toxicity to Animals :**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans :**

May cause damage to the following organs: kidneys, liver, central nervous system (CNS).

**Other Toxic Effects on Humans :**

Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals :**

Lowest Published Lethal Dose: LDL [Mouse] - Route - Oral; Dose: 531 mg/kg LDL [Dog] - Route - Oral; Dose: 200 mg/kg Lethal Dose/Conc 50% Kill: LD50 [Mouse] - Route - Intraperitoneal; Dose: 136 mg/kg

**Special remarks on chronic effects on Humans :**

Not available

**Special Remarks on other Toxic Effects on Humans :**

Acute Potential Health Effects: Skin: May cause severe irritation and possible burns. Eyes: May cause eye irritation. May cause conjunctivitis. May cause corneal opacification. Inhalation: May cause respiratory tract irritation, pulmonary edema, asphyxia, chemical pneumonitis, upper airway obstruction caused by edema. Ingestion: May cause gastrointestinal tract irritation with possible burns. May cause nausea, vomiting, hypermotility, and diarrhea (possibly with blood). May affect behavior/Central Nervous system (excitement, convulsions), respiration. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect the liver (necrotic lesions, and kidneys (renal failure, hemoglobinuria, necrotic lesions), metabolism (anorexia), and the blood (anemia)

**SECTION 12 : ECOLOGICAL INFORMATION**

**Ecotoxicity:**

Not available.

**BOD5 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.

**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:**

CLASS 5.1:Oxidizing material.

**Identification:**

Oxidizing solid, n.o.s. (Potassium Iodate) UNNA: 1479 PG: III

**Special Provisions for Transport:**

Not applicable.

**SECTION 15 : REGULATORY INFORMATION**

**Federal and State Regulations:**

TSCA 8(b) inventory: Potassium Iodate

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications: :**

WHMIS(Canada): class C: Oxidizing material.

**DSCL (EEC):**

R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S17- Keep away from combustible material. S46- If swallowed, seek medical advice immediately and show this container or label.

**HMIS(U.S.A.):**

<b>Health Hazard</b>	: 2	<b>Reactivity</b>	: 1
<b>Fire Hazard</b>	: 0	<b>Personal Protection</b>	: E
<b>National Fire Protection Association (U.S.A.):</b>			
<b>Health</b>	: 2	<b>Reactivity</b>	: 0
<b>Flammability</b>	: 0	<b>Specific hazard</b>	:

**Protective Equipment:** Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**SECTION 16 : ADDITIONAL INFORMATION**

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. PROTO CHEMICAL INDUSTRIES shall not be held liable for any damage resulting from handling or from contact with the above product.