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Technical Data Sheet

POTASSIUM IODIDE

1. Chemical Product Identification

GHS Product Identifier: 101.07, Potassium Iodide, Technical; 101.24, Potassium Iodide, USP; 101.14, Potassium Iodide ACS; 101.08, Potassium Iodide 45% Soln.; 101.09, Potassium Iodide 50% Soln., 101.84 Potassium Iodide Photo Grade.

Formula: KI

CAS No.: 7681-11-0

Formula Description: Technical: Off white to light brown crystals or granular powder. **USP/ACS/Photo:** Colorless or white crystals or granular powder; slightly hygroscopic in moist air. Tends to cake during storage. On long exposure to air becomes yellow due to liberation of iodine. Light and moisture accelerates decomposition. **45% & 50% Solution:** Clear colorless to light yellow solution.

Recommended Use: Potassium Iodide is an inorganic halogenated salt that is used in the textile industry as a heat dispersant, a corrosion inhibitor/acid intensifier in oilfield gas production, used in x-ray films, LCD manufacturing, nylon stabilizer, trace mineral in animal feeds and/or dietary supplement and food additive.

General Properties:

Tech/USP/ACS

Molecular Weight: 166.0

Density (25°C): 3.12

Solubility: 144 g/100 ml H₂O (20°C)

208 g/100 ml H₂O (100°C)

45% Soln

Density: 12.2 lbs/gal

50% Soln

Density: 12.77 lbs/gal

Photo Grade

Molecular Weight: 166.0

Solubility: 144 gm/100 ml H₂O (20°C)

208 gm/100 ml H₂O (100°C)

Composition: Iodine 76.45% Potassium 23.55%



2. Chemical Product Specifications

Chemical Identity	Assay	pH (as is)
Potassium Iodide 45%	44.5% to 45.5%	7.0 to 11.0

Chemical Identity	Assay	pH (as is)
Potassium Iodide 50%	49.5% to 50.4%	7.0 to 11.0

Chemical Identity	Assay (as is)
Potassium Iodide Tech	98.0% minimum

Chemical Identity	Identification	Alkalinity	Loss on Drying
Potassium Iodide USP	USP Standards	USP Standards	1.0% maximum
	Iodate	Nitrate, Nitrite & Ammonia	Thiosulfate & Barium
	4 ppm maximum	USP Standards	USP Standards
	Heavy Metals	Assay (Dried)	
	0.001% maximum	99.0-101.5%	Conforms to the current USP monograph.

Chemical Identity	Assay	pH (5% Solution)	Insoluble Matter
Potassium Iodide ACS	99.0% minimum	6.0 – 9.2	0.005% maximum
	Loss on Drying @ 150°C	Chloride & Bromide (as Cl)	Iodate (IO₃)
	0.2% maximum	0.01% maximum	3 ppm maximum
	Phosphate (PO₄)	Sulfate (SO₄)	Barium (Ba)
	0.001% maximum	0.005% maximum	0.002% maximum
	Heavy Metals (as Pb)	Iron (Fe)	Calcium (Ca)
	5 ppm maximum	3 ppm maximum	0.002% maximum
	Magnesium (Mg)	Sodium (Na)	
0.001% maximum	0.005% maximum	Conforms to current ACS Edition.	

Chemical Identity	Assay	pH (5% Solution)	Insoluble Matter
Potassium Iodide Photo	99.0% minimum	6.0 – 9.2	0.005% maximum
	Loss on Drying @ 150°C	Chloride & Bromide (as Cl)	Iodate (IO₃)
	0.2% maximum	0.01% maximum	3 ppm maximum
	Nitrogen Compounds (as N)	Phosphate (PO₄)	Sulfate (SO₄)
	0.001% maximum	0.001% maximum	0.005% maximum
	Barium (Ba)	Heavy Metals (as Pb)	Iron (Fe)
	0.002% maximum	5 ppm maximum	3 ppm maximum
	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)
0.002% maximum	0.001% maximum	0.005% maximum	

3. Standard Packaging

Net Weight	Packaging	Product
50 lbs.	LDPE 3 gal Pail	Tech Only
25 lbs.	LDPE 2 gal Pail	USP/ACS
100 lbs.	UN1G 8 gal Fiberdrum	USP/ACS
65 lbs.	5 gal HDPE Drum	45% Soln
600 lbs.	55 gal HDPE Drum	45% Soln
650 lbs.	55 gal HDPE Drum	50% Soln
Dry material packaged with polyethylene liner. Liquid material packaged in high density polyethylene drums. All suitable for export.		

4. Transport Information

SHIPPING CRITERIA	US DOT	IATA and IMDG
Proper Shipping Name	Not Regulated	Not Regulated
Hazard Class		
Identification Number		
Packing Group		
Shipping Label		
Additional Marking Requirement		

5. Handling and Storage

Storage Conditions: Store in UN-rated fiber or HDPE drum and an inner polyethylene liner. Store in a cool, dry, well-ventilated area away from incompatible substances, direct sunlight or elevated temperatures. Keep containers tightly closed using a tamper-evident seal. Protect against physical damage. Shower and dispose of outer clothing and change to clean garments at the end of the day. Wash hands before eating and do not eat, drink or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues.

SDS with detailed information available upon request.