DEEPWATER CHEMICALS

Expertise in Iodine Chemistry!

Potassium Iodide

KI | CAS#7681-11-0 | EINECS # 231-659-4 | Technical Data Sheet

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 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 polymer industry in improving structural properties [1-2]. It is a corrosion inhibitor/acid intensifier in oilfield gas production [3-4], used in x-ray films owing to luminescence properties [5], LCD manufacturing as a polarizer [6], nylon stabilizer [7], trace mineral in animal feeds and/or dietary supplement and food additive[8].

General Properties: Technical/USP/ ACS

Molecular Weight	**166.0**	**Density**	**3.12 (25°C)**
Solubility	**144 g/100 ml H_2O (20°C)**	**Solubility**	**208 g/100 ml H_2O (100°C)**

General Properties: 45% & 50% Solution

45% Solution		**Density**	**12.2 lbs/gal** **1.46 g/ml**
50% Solution		**Density**	**12.77 lbs/gal** **1.54 g/ml**

General Properties: Photo Grade

Molecular Weight	**166.0**	**Composition**	**Iodine 76.45%** **Potassium 23.55%**
Solubility	**144 g/100 ml H_2O (20°C)**	**Solubility**	**208 g/100 ml H_2O (100°C)**

Chemical Product Specifications

	Tech
Assay	98.0% min

	45% Solution	50% Solution
Assay	44.5% - 45.5%	49.5% - 50.4%
pH (as is)	7.0 - 11.0	7.0 - 11.0

Deepwater's PurI2ty products offer you full traceability for all raw materials.

All products are manufactured under current Good Manufacturing Practices (cGMP)

in our US FDA registered plant. FEI #2013633.

PurI2ty®

	PurI2ty USP	PurI2ty ACS	PurI2ty Photo
Assay	99.0% – 101.5% (Anhydrous)	99.0% min (as is)	99.0% min (as is)
Identification	USP Standards A&B		
Alkalinity	USP Standards		
pH (5% Solution)		6.0 – 9.2	6.0 – 9.2
Insoluble Matter		0.005% max	0.005% max

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Loss on Drying	1.0% max	0.2% max	0.2% max
	PurI2ty USP	**PurI2ty ACS**	**PurI2ty Photo**
Chloride & Bromide (as Cl)		0.01% max	0.01% max
Iodate (IO_3)	4 ppm max	3 ppm max	3 ppm max
Nitrogen Compounds (as N)			0.001% max
Phosphate (PO_4)		0.001% max	0.001% max
Sulfate (SO_4)		0.005% max	0.005% max
Nitrate, Nitrite & Ammonia	USP Standards		
Thiosulfate & Barium	USP Standards		
Barium (Ba)		0.002% max	0.002% max
Heavy Metals (as Pb)		5 ppm max	5 ppm max
Iron (Fe)		3 ppm max	3 ppm max
Calcium (Ca)		0.002% max	0.002% max
Magnesium (Mg)		0.001% max	0.001% max
Sodium (Na)		0.005% max	0.005% max
Elemental Impurities Class 1	Cd, Pb, As, Hg		
Elemental Impurities Class 2A	Co, V, Ni		

**Compendial grades conform to current USP and ACS editions*

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
Material packaged with Saran inner liner and polyethylene out liner; suitable for export. Curtec drum does not include liner.		

SDS with detailed information available upon request.

References:

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