




Section 1. Identification of the Substance/Mixture and the Company

Product Name	Gram's Iodine Solution
Product Number	GIN
Intended Use	EN: Laboratory reagent. For professional use only. DA: Laboratoriereagens. Kun til professionelt brug. DE: Laboratoriumreagens. Alleen voor professioneel gebruik. EL: Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο. ES: Reactivo de laboratorio. Sólo para uso profesional. FR: Réactif de laboratoire. Pour un usage professionnel uniquement. IT: Laboratorio di reagente. Solo per uso professionale. NL: Laboratoriumreagens. Alleen voor professioneel gebruik. PT: Reagente de laboratório. Para uso profissional. SV: Laboratoriereagens. Endast för yrkesmässig användning.
Manufacturer	ScyTek Laboratories, Inc.
Address	205 South 600 West Logan, Utah 84321 U.S.A.
Phone Number	800-729-8350
Fax Number	435-755-0015
e-mail	msds@scytek.com
Website	scytek.com

Section 2. Hazards Identification

Classification: Regulation (EC) No 1272/2008 (CLP)	 GHS07 Skin Irrit 2. H315 Causes skin irritation.
Classification: Directive 1999/45/EC	 Xi; EN: Irritant DA: Lokalirriterende DE: Reizend EL: Ερεθιστικό ES: Irritante FR: Irritant IT: Irritante NL: Irriterend PT: Irritante SV: Irriterande R36/38 EN: Irritating to eyes and skin. DA: Irriterer øjnene og huden DE: Reizt die Augen und die Haut. EL: Ερεθίζει τα μάτια και το δέρμα. ES: Irrita los ojos y la piel. FR: Irritant pour les yeux et la peau. IT: Irritante per gli occhi e la pelle.



	NL: Irriterend voor de ogen en de huid. PT: Irritante para os olhos e pele. SV: Irriterar ögonen och huden. For full text of R- & S- phrases: see Section 15.		
NFPA Scale: 0-4			
HMIS (U.S.A.) Scale: 0-4	HEALTH	2	
	FLAMMABILITY	0	
	PHYSICAL HAZARD	0	
	PERSONAL PROTECTION	H	
Other Hazards	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.		

Section 3. Composition and Information on Ingredients

Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%/w/v.

Hazardous Ingredients:	CAS#	EC#	GHS Symbols	%
Water	7732-18-5	231-791-2	n/a	≥ 97
Potassium Iodide	7681-11-0	231-659-4	n/a	≤ 0.7
Iodine	7553-56-2	231-442-4	 Irritant, 2, 4 H315 H319 H332  Haz to aquatic, 1 H400	≤ 0.4

Section 4. First Aid Measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water and get immediate medical attention.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt, or waistband. Get immediate medical attention.

Section 5. Fire Fighting Measures

Extinguishing Media	Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.
Unusual Fire and Explosion Hazards	Mixing iodine, antimony and ammonia resulted in an explosion. A violent reaction occurs between iodine and acetaldehyde.
General Information	As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus. Keep material away from heat, flame, ignition sources, and reactive materials. Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

Section 7. Handling and Storage

Precautions for safe handling.

Avoid contact with skin and eyes.

Wash thoroughly after handling.

Avoid breathing vapor.

Conditions for safe storage, including any incompatibilities.

Store in well ventilated area.

Keep container tightly closed.

Store at 15-30°C.

Specific end use(s).

Not applicable.

Section 8. Exposure Controls / Personal Protection

Exposure Limits	Iodine: OSHA PEL 0.1ppm Ceiling; 1mg/m3 Ceiling. Potassium Iodide: N/A
Personal Protection	<p>Eye/Face protection. Safety glasses or goggles are required.</p> <p>Skin protection. Protective clothing is required.</p> <p>Hand protection. Chemical resistant gloves are required. Glove material must be resistant to the components of this product. Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</p> <p>Respiratory protection. Avoid breathing vapor.</p> <p>Environmental exposure controls. Avoid releasing large quantities into the environment. No additional information.</p>
Engineering Controls	Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

Section 9. Physical and Chemical Properties

Physical State	Liquid
Color	Brown
Odor	Iodine odor
Odor Threshold	Unknown
pH	Neutral
Melting Point/ Freezing Point	~ 0°C (32°F)
Initial Boiling Point	~ 101°C (212°F)
Flash Point	Unknown
Evaporation Rate	(water=1): 1
Flammability (solid, gas)	Unknown

Upper/Lower Flammability Limits	Unknown
Vapor Pressure	(mmHg): 18 @ 20°C
Vapor Density	(Air = 1): 0.60
Relative Density	1.1g/mL
Solubility(ies)	Infinitely miscible with water.
Partition Coefficient: n-octanol/water	Unknown
Auto-Ignition Temperature	Unknown
Decomposition Temperature	Unknown
Viscosity	Unknown
Explosive Properties	Not explosive.
Oxidizing Properties	Unknown

Section 10. Stability and Reactivity

Reactivity	Moisture Sensitive. Light Sensitive. Air Sensitive. Air causes decomposition to iodine. 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. (Potassium Iodide.)
Chemical Stability	Stable under normal temperatures and pressures.
Possibility of Hazardous Reactions	No hazardous reactions known.
Conditions to Avoid	Direct sunlight, Incompatible materials, fire.
Incompatible Materials	Incompatible with liquid chlorine, acetaldehyde, ammonia, salt + ethanol, ammonium hydroxide, methyl alcohol, antimony, silver azide, lithium, potassium, sodium, phosphorous, bromine pentafluoride, fluorine, oxygen difluoride, magnesium, finely divided metals, organic solvents, rubber goods, plastics, zinc, aluminum, alkali metals, sulphur, ammonia solutions, Bromine trifluoride, reducing agents, iron, ethanol + butadiene; ethanol + phosphorous; ethanol + methanol + HgO; foramide + pyridine + sulfur trioxide; formamide; halogens or interhalogens; mercuric oxide; metal carbides; oxygen; pyridine; sodium hydride. Violent reaction with iodine and aluminum + diethyl ether...(and) titanium (above 113 deg C).
Hazardous Decomposition Materials	None known.

Section 11. Toxicological Information

Information on Toxicological Effects.	<p>Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.</p> <p>Acute Toxicity. Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of inhalation.</p> <p>Skin Corrosion/Irritation. Causes skin irritation. It can cause brown stains on the skin. It can be absorbed through the skin.</p> <p>Serious Eye Damage/Irritation. Eye contact with liquid causes irritation. Iodine vapors may cause eye irritation. Eye contact with an excessive amount of iodine vapor may also cause blepharitis.</p> <p>Respiratory or skin sensitization. Low hazard during normal industrial handling. Excessive inhalation of iodine vapors may cause respiratory tract, nasal, and mucous membrane irritation. Symptoms may include coughing, tightness in the chest, rhinitis, dyspnea/respiratory distress, coughing, sneezing, pulmonary edema, chemical</p>
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	pneumonitis, edema of the larynx and bronchi, pharyngitis, swelling of the parotid gland, and cachexia. High exposure may lead to lung disease and may also affect behavior/central nervous system (delirium, hallucination, depression, seizure). Germ Cell Mutagenicity. Mutagenic for mammalian somatic cells. Developmental Toxicity: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE] [Potassium Iodide]. Contains material which may cause damage to the following organs: blood, kidneys, liver, skin, eyes.
Carcinogenicity.	International Agency for Research on Cancer (IARC). None of the components are listed. National Toxicology Program (NTP). None of the components are listed.

Section 12. Ecological Information

Toxicity	Fish: No relevant studies identified. Rat: Acute oral toxicity (LD50): 14000mg/kg. (Iodine) Crustacea: No relevant studies identified. Algae/Aquatic Plants: No relevant studies identified. Other Organisms: No relevant studies identified.
Persistence and Degradability.	No relevant studies identified.
Bioaccumulative Potential.	No relevant studies identified.
Mobility in Soil.	No relevant studies identified.
Additional Remarks	None.
Results of PBT and vPvB Assessment.	PBT: This mixture does not contain any substances that are assessed to be a PBT. vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

Section 13. Disposal Considerations

Waste Disposal Methods.	Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environment control regulations.
Product/Packaging Disposal.	Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.
Other Disposal Recommendations.	No relevant data available.

Section 14. Transport Information

UN Number DOT, IATA,IMDG, ADR	Not applicable.
UN Proper Shipping Name DOT, IATA,IMDG, ADR	Not applicable.
Transport Hazard Class(es)	DOT Not a DOT controlled product. IATA, IMDG, ADR Not an IATA, IMDG, ADR controlled product.
Packing Group DOT, IATA,IMDG, ADR	N/A
Environmental Hazards	Marine Pollutant: No
Special Precautions for User	Not applicable.
ADR Hazard Identification	Not applicable.

Number (Kemler Code).	
IMDG Segregation Group	Not applicable.
Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code.	Not applicable.

Section 15. Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.

Specific Toxic Chemical Listings; Section 313	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Extremely Hazardous Substances; Section 355	None of the components in this mixture are listed.
Toxic Substances Control Act; TSCA	All of the components in this mixture are listed.
California Proposition 65	None of the components in this mixture are listed.
Chemical Safety Assessment	No Chemical Safety Assessment has been carried out for this substance/mixture by ScyTek Laboratories, Inc.
R phrases	<p>R36/38 EN: Irritating to eyes and skin. DA: Irriterer øjnene og huden DE: Reizt die Augen und die Haut. EL: Ερεθίζει τα μάτια και το δέρμα. ES: Irrita los ojos y la piel. FR: Irritant pour les yeux et la peau. IT: Irritante per gli occhi e la pelle. NL: Irriterend voor de ogen en de huid. PT: Irritante para os olhos e pele. SV: Irriterar ögonen och huden.</p> <p>R22 EN: Harmful if swallowed. DA: Farlig ved indtagelse. DE: Gesundheitsschädlich beim Verschlucken. EL: Επιβλαβές σε περίπτωση καταπόσεως. ES: Nocivo por ingestión. FR: Nocif en cas d'ingestion. IT: Nocivo per ingestione. NL: Schadelijk bij opname door de mond. PT: Nocivo por ingestão. SV: Farligt vid förtäring.</p> <p>R50/53 EN: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. DA: Meget giftig for organismer, der lever i vand; kan forårsage uønskede langtidsvirkninger i vandmiljøet. DE: Sehr giftig für Wasserorganismen, kann in Gewässern längerfristig schädliche Wirkungen haben. EL: Πολύ τοξικό για τους υδρόβιους οργανισμούς, μπορεί να προκαλέσει μακροχρόνιες δυσμενείς επιπτώσεις στο υδάτινο περιβάλλον. ES: Muy tóxico para los organismos acuáticos, puede provocar a largo plazo efectos negativos en el medio ambiente acuático. FR: Très toxique pour les organismes aquatiques, peut entraîner des effets néfastes a long terme pour l'environnement aquatique. IT: Altamente tossico per gli organismi acquatici, può provocare a lungo termine effetti negativi per l'ambiente acquatico.</p>

	<p>NL: Zeer vergiftig voor in het water levende organismen; kan in het aquatisch milieu op lange termijn schadelijke effecten veroorzaken. PT: Muito tóxico para os organismos aquáticos, podendo causar efeitos nefastos a longo prazo no ambiente aquático. SV: Mycket giftigt för vattenlevande organismer, kan orsaka skadliga långtidseffekter i vattenmiljön.</p>
S phrases	<p>S2 EN: Keep out of the reach of children. DA: Opbevares utilgængeligt for børn. DE: Darf nicht in die Hände von Kindern gelangen. EL: Μακριά από παιδιά. ES: Manténgase fuera del alcance de los niños. FR: Conserver hors de la portee des enfants. IT: Conservare fuori della portata dei bambini. NL: Buiten bereik van kinderen bewaren. PT: Manter fora do alcance das crianças. SV: Förvaras oåtkomligt för barn.</p> <p>S45 EN: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). DA: Ved ulykkestilfælde eller ved ildebefindende er omgående lægebehandling nødvendig; vis etiketten, hvis det er muligt. DE: Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen). EL: Σε περίπτωση ατυχήματος ή αν αισθανθείτε αδιαθεσία ζητήστε αμέσως ιατρική συμβουλή (δείξτε την ετικέτα αν είναι δυνατό). ES: En caso de accidente o malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta). FR: En cas d'accident ou de malaise, consulter immédiatement un medecin (si possible lui montrer l'etiquette). IT: In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta). NL: Bij een ongeval of indien men zich onwel voelt, onmiddellijk een arts raadplegen (indien mogelijk hem dit etiket tonen). PT: Em caso de acidente ou de indisposição, consultar imediatamente o médico (se possível mostrar-lhe o rótulo). SV: Vid olycksfall, illamående eller annan påverkan, kontakta omedelbart läkare. Visa om möjligt etiketten.</p>

Section 16. Other 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. ScyTek Laboratories shall not be held liable for any damage resulting from handling or from contact with the above product.