LIVINGSTONE INTERNATIONAL PTY LTD
Branches in Sydney, Melbourne, Brisbane and Perth
HEAD OFFICE: Suite 1, Level 9, Building 3, 189 O'Riodan Street
Mascot NSW 2020 AUSTRALIA
EMAIL: sales@livingstone.com.au
WEBSITE: www.livingstone.com.au
PHONE: 1300 548 289
FAX: 1300 780 008
ABN 66 052 001 144

Issue Date: 11/07/2022
Last Revision Date: N/A
Superseded Date: N/A
Version Number: 01

SAFETY DATA SHEET

Product Code: CSIA005-500G

SECTION 1 PRODUCT IDENTIFICATION

GHS Product Identifier: IODINE

Recommended use of the chemical and restrictions on use: Laboratory reagent, dyes (aniline dyes, phthalein dyes), alkylation and condensation catalyst, iodides, iodates, x-ray contrast media, food and feed additive, stabilizers, photographic film, water treatment, pharmaceuticals, medicinal soaps, unsaturation indicator, germicides and antiseptics.

Other Names

Name

IODINE AR

SECTION 2 HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Acute Toxicity - Dermal: Category 4
Acute Toxicity - Inhalation: Category 4
Eye Damage/Irritation: Category 2A
Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Skin Corrosion/Irritation: Category 2
STOT Repeated Exposure: Category 1
STOT Single Exposure: Category 3 (respiratory tract irritation)

Signal Word (s): DANGER

Hazard Statement (s)

H400 Very toxic to aquatic life.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure .

Pictogram (s): Exclamation mark,Environment,Health hazard

Precautionary statement – Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P314 Get medical advice/attention if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Precautionary statement – Storage P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary statement – Disposal P501 Dispose of contents/container to an approved waste disposal plant.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Iodine	7553-56-2	100 %

SECTION 4 FIRST AID MEASURES

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5 FIRE FIGHTING MEASURES

Hazards from Combustion Products Liberates toxic hydrogen iodide fumes in fire.

Specific Methods Small fire: Use dry chemical, CO2 or water spray.
Large fire: Use water spray, fog or foam - Do NOT use water jets.
If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Avoid getting water inside the containers.

Specific hazards arising from the chemical Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated.

Hazchem Code 2WE

Precautions in connection with Fire Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

Issue Date: 11/07/2022
Last Revision Date: N/A
Superseded Date: N/A
Version Number: 01

SAFETY DATA SHEET

Product Code: CSIA005-500G

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spills & Disposal
Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. Do NOT touch or walk through this product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas.
Small spills: React with sodium thiosulfate and wash to drain with large quantities of water. Wash area down with sodium thiosulfate and then water.
Large spills: Cover with DRY earth, sand or other non-combustible material followed by plastic sheet to minimize spreading or contact with rain. Collect material in a plastic bag contained inside another plastic bag and place into loosely-covered plastic containers for later disposal.
DO NOT GET WATER INSIDE CONTAINERS.

Personal Precautions
Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Personal Protection
Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages
Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Environmental Precautions
Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling
Work under fume extractor. Do not inhale substance. Change contaminated clothing. Wash hands after working with substance.

Conditions for safe storage, including any incompatibilities
Store in well ventilated area. Keep containers closed at all times. Protect from direct sunlight and moisture. Store at room temperature (15 to 25 °C recommended).

Storage Regulations
Refer Australian Standard AS 3780-1994 'The storage and handling of corrosive substances'. Refer Australian Standard AS/NZS 4452:1997 'The storage and handling of toxic substances'.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Iodine			0.1	1	As iodine Peak limitation

Other Exposure Information
These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
A time weighted average (TWA) has been established for Iodine (Safe Work Australia) of 1 mg/m³, (0.1 ppm) - Peak Limitation.
The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
'Peak Limitation' - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

	pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Recommendation: Goggles or face-shield.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use. Recommendation: Enclosed footwear.
Body Protection	Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Form	Solid
Appearance	Heavy grayish-black crystals; granules with metallic lustre; brittle plates, greyish violet in colour with a metallic sheen.
Odour	Pungent odour.
Melting Point	113.5 °C
Boiling Point	184.5 °C
Solubility in Water	Practically insoluble.
Solubility in Organic Solvents	Soluble in alcohol, carbon disulfide, chloroform, ether, carbon tetrachloride, glycerol and alkaline iodide solutions.
Specific Gravity	4.93
Vapour Pressure	0.41 hPa @ 25 °C
Vapour Density (Air=1)	8.8
Partition Coefficient: n-octanol/water	logP(o/w): 2.49
Flammability	Non combustible material.
Molecular Weight	253.81
Other Information	Readily sublimed to a violet vapour. Semiconductor.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under normal use conditons.
Conditions to Avoid	Incompatibles.
Incompatible Materials	Alkali metals, alkali oxides, ammonia, ammonium compounds, antimony powder, acetylene, aluminium, azides, carbides, damp aluminium, ethanol/phosphorous, fluorine, halogen fluorides, halogen-halogen coumpounds, magnesium, nonmetallic oxides, nonmetals, semimetals, metals in powder form, lithium silicide, tetra amine copper, turpentine oils and /or turpentine substitues, sulfate/ethanol, some metal acetylides, and zinc powders and potassium.
Hazardous Decomposition Products	May liberate toxic fumes in fire.
Possibility of hazardous reactions	Explosive products are produced when iodine is reacted with ammonia, tetra amine copper, sulfate/ethanol. Violent reactions occur with ethanol/phosphorous, fluorine, halogen fluorides, some metal acetylides and carbides. Mixtures of iodine with antimony powder may ignite. Mixtures of iodine with aluminium, magnesium and zinc powders ignite when damp. Mixed with potassium is a weak impact explosive.
Hazardous Polymerization	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity - Oral	LD50 (rat) 14000 mg/kg.
Ingestion	Symptoms are disagreeable metallic taste, gastric upset, violent abdominal pain, bloody diarrhea, fever and severe collapse with feeble pulse. Collapse may be delayed until the second day.
Inhalation	Harmful if inhaled. Causes severe irritation to the mucous membrane and respiratory tract. Symptoms are similar to ingestion.
Skin	Contact with skin, may cause irritation.
Eye	Causes serious eye irritation.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	STOT Single Exposure: Category 3 (respiratory tract irritation) H335 May cause respiratory irritation.
STOT-repeated exposure	STOT Repeated Exposure: Category 1 H372 Causes damage to organs through prolonged or repeated exposure.
Chronic Effects	Symptoms of chronic poisoning are skin lesions, headache and allergic reactions with rhinitis, conjunctivitis, bronchitis and asthma. In severe cases there may be weakness, anaemia, loss of weight and general depression. These symptoms are normally refered to as iodism. Certain individuals are highly sensitive to iodine and iodides and the symptoms of iodism may occur after exposure to minute amounts of iodine or iodides.
Mutagenicity	Not classified based on available information.

Issue Date: 11/07/2022
Last Revision Date: N/A
Superseded Date: N/A
Version Number: 01

SAFETY DATA SHEET

Product Code: CSIA005-500G

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic organisms.
Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	No appreciable bioaccumulation is to be expected (log P(o/w) 1-3).
Environmental Protection	Do not allow product to enter drains, waterways or sewers.
Other Information	Do not allow to enter waters, waste water, or soil!

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
Waste Disposal	Inorganic peroxides and oxidants as well as bromine and iodine should be rendered harmless by reduction with acidic aqueous sodium thiosulfate solution.

SECTION 14 TRANSPORT INFORMATION

Transport Information	Dangerous Goods of Class 8 Corrosives are incompatible in a placard load with any of the following: - Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are alkalis and Class 7; and are incompatible with food and food packaging in any quantity.
U.N. Number	3495
Transport hazard class(es)	Class 8
Sub.Risk	Sub Risk 6.1
Hazchem Code	2WE
Packing Group	III
EPG Number	37
UN Number (Road Transport)	UN 3495 proper shipping name: IODINE
Environmental Hazards	Very toxic to aquatic organisms.

SECTION 15 REGULATORY INFORMATION

Regulatory Information	All of the significant ingredients in this formulation are compliant with Australian Industrial Chemicals Introduction Scheme (AICIS) regulations. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

Issue Date: 11/07/2022
Last Revision Date: N/A
Superseded Date: N/A
Version Number: 01

SAFETY DATA SHEET

Product Code: CSIA005-500G

SECTION 16 OTHER INFORMATION

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Empirical Formula & Structural Formula

I2

END OF SDS