

MATERIAL SAFETY DATA SHEET**Product Name:** Iodine CVS (N/10)**CAS No.:** 7553-56-2**Version:** 0**1. Identification**

Product Code : 97003
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
IODINE	7553-56-2	0.1 ± 0.002 N

3. Hazards Identification**Hazard classification****Health hazards**

Acute toxicity (Oral) : Category 2
Acute toxicity (Dermal) : Category 4
Acute toxicity (Inhalation - vapor) : Category 4
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 1
Skin sensitizer : Category 1

Unknown toxicity

Acute toxicity, dermal : 100 %
Acute toxicity, inhalation, vapor : 100 %
Acute toxicity, inhalation, dust or mist : 100 %

Environmental hazards

Acute hazards to the aquatic environment : Category 1

Unknown toxicity

Chronic hazards to the aquatic environment : 0 %
Acute hazards to the aquatic environment : 100 %

Labels elements**Hazard symbol**

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Signal word	: Danger
Hazard statement	: Harmful in contact with skin or if inhaled. Fatal if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Very toxic to aquatic life.
Precautionary statement	
Prevention	: Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wash thoroughly after handling.
Response	: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse. Collect spillage.
Storage	: Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	: None.

4. First Aid Measures

General information	: Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
Ingestion	: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation	: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	: Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention. Wash

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- contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.
- Most important symptoms/effects, acute and delayed** : Causes severe skin and eye burns. Causes digestive tract burns.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

5. Fire fighting measures

- General fire hazards** : Strong oxidizer - contact with other material may cause fire.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : Strong oxidizer. Enhances combustion of organic matter and other combustible materials.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Do not absorb in sawdust or other combustible materials. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Inform authorities if large amounts are involved.
- Environmental precautions** : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer .

7. Handling and Storage

- Precautions for safe handling** : Do not get in eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep away from combustible material. Do not breathe dust/fume/gas/mist/vapors/spray.
- Conditions for safe storage, including any incompatibilities** : Keep container tightly closed. Store in a well-ventilated place. Keep away from sources of ignition - No smoking. Keep away from combustible material

8. Exposure Controls Personal Protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
IODINE - Inhalable fraction and vapor.	TWA	0.01 ppm	US. ACGIH Threshold Limit Values (2011)
IODINE - Vapor and aerosol.	STEL	0.01 ppm	US. ACGIH Threshold Limit Values (2011)
IODINE	Ceil_Time	0.1 ppm 1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceiling	0.1 ppm 1 mg/m3	US. OSHA Table Z-1 Limits for Air

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			Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	0.1 ppm 1 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	0.1 ppm 1 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	10 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	1 µg/m ³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	1 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	0.1 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	Ceiling	0.1 ppm 1 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

General information : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection : Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing and gloves.

Respiratory protection : In case of inadequate ventilation use suitable respirator.

Hygiene measures : Do not get in eyes. Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Provide eyewash station and safety shower.

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9. Physical and Chemical Properties

Appearance	:	Brown colour liquid.
Odor	:	Sharp characteristic odor
pH	:	No data available.
Melting point/freezing point	:	113.7 °C
Initial boiling point and boiling range	:	184.4 °C
Flash Point	:	Not applicable
Vapor pressure	:	0.031 kPa (25 °C)
Vapor density	:	No data available.
Relative density	:	4.93 (25 °C)
Solubility in water	:	Slightly Soluble
Solubility (other)	:	No data available.
Formula	:	I ₂
Molecular Weight	:	253.81 g/mol

10. Stability and Reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Material is stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Sunlight. Avoid contact with strong reducing agents. Contact with combustibles. Contact with incompatible materials.
Incompatible materials	:	Ammonia, acetylene, acetaldehyde, powdered aluminum, active metals, liquid chlorine.
Hazardous decomposition products	:	By heating and fire, toxic vapors/gases may be formed.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion	:	Harmful if swallowed.
Inhalation	:	Severely irritating to respiratory system.
Skin contact	:	Causes skin burns. May cause an allergic skin reaction.
Eye contact	:	Causes eye burns.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	:	LD 50 (Rat): 14 g/kg LDLo (Human): 28 mg/kg
Dermal Product	:	No data available.
Inhalation Product	:	No data available.
Repeated dose toxicity Product	:	No data available.
Skin corrosion/irritation Product	:	No data available.

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Serious eye damage/eye irritation Product	:	No data available.
Respiratory or skin sensitization Product	:	Not a skin sensitizer.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE	:	No carcinogenic components identified
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE	:	No carcinogenic components identified
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	:	No carcinogenic components identified
Germ cell mutagenicity In vitro Product	:	No mutagenic components identified
In vivo Product	:	No mutagenic components identified
Reproductive toxicity Product	:	May cause harm to the unborn child.
Specific target organ toxicity - single exposure Product	:	None known.
Specific target organ toxicity - repeated exposure Product	:	None known.
Aspiration hazard Product	:	Not classified.
Other effects	:	None known.

12. Ecological Information**Ecotoxicity****Acute hazards to the aquatic environment :**

Fish Product	:	LC 50 (Guppy (Poecilia reticulata), 24 h): 3 mg/l Mortality LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 0.48 - 0.58 mg/l Mortality
Aquatic invertebrates Product	:	LC 50 (Water flea (Daphnia magna), 96 h): 0.51 - 0.68 mg/l Mortality .

Chronic hazards to the aquatic environment :

Fish Product	:	No data available.
Aquatic invertebrates Product	:	No data available.
Toxicity to Aquatic Plants Product:	:	No data available.
Persistence and degradability		
Biodegradation Product	:	The product is not expected to be biodegradable.
BOD/COD ratio Product	:	No data available.
Bioaccumulative potential		
Bioconcentration factor (BCF) Product	:	No data available on bioaccumulation.
Partition coefficient n-octanol / water (log Kow) Product	:	Log Kow: 2.49
Mobility in soil	:	No data available.

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Other adverse effects : Very toxic to aquatic organisms.

13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 3495	IODINE	8, 6.1	III	No
IMDG	UN 3495	IODINE	8, 6.1	III	No
IATA	UN 3495	IODINE	8, 6.1	III	No

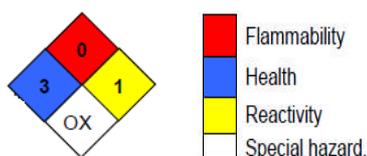
15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information

NFPA Hazard ID



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Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe
OX: Oxidizer

Issue Date :01/08/2014**Version : 0**

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