



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier SILVER IODATE, REAGENT
Version # 02
Issue date March-15-2010
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Supersedes date March-15-2010
Chemical name SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S.
CAS # 7783-97-3
Product code 84
Product use professional, scientific and technical activities: other professional, scientific and technical activities
Manufacturer information GFS Chemicals, Inc.
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Emergency Assistance Chemtrec 800-424-9300
Supplier Not available.

2. Hazards Identification

Emergency overview DANGER
Oxidizing material. Exposure to powder or dusts may be irritating to eyes, nose and throat. May cause irritation to the respiratory system. May irritate eyes and skin. The toxicological properties of this material have not been fully investigated.

Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Dust in the eyes will cause irritation. May irritate eyes.
Skin Dust or powder may irritate the skin. May cause skin irritation.
Inhalation Inhalation of dusts may cause respiratory irritation. Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Ingestion May be harmful if swallowed. Irritating. May cause nausea, stomach pain and vomiting. May cause irritation.

Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms Irritation of eyes. Upper respiratory tract irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Potential environmental effects Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S.	7783-97-3	60 - 100

4. First Aid Measures

First aid procedures

Inhalation

If dust from the material is inhaled, remove the affected person immediately to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician if symptoms develop or persist.

Skin contact

Before washing use a dry brush to remove dust from skin. Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

Contact with combustible material may cause fire. May explode from heat or contamination. These substances will accelerate burning when involved in a fire. Some will react explosively with hydrocarbons (fuels). Some may decompose explosively when heated or involved in a fire. Runoff may create fire or explosion hazard.

Extinguishing media

Suitable extinguishing media

Water. Water fog.

Unsuitable extinguishing media

Not available.

Protection of firefighters

Specific hazards arising from the chemical

Container may explode in heat of fire. Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions

Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Cool containers exposed to flames with water until well after the fire is out.

Explosion data

Sensitivity to static discharge

Not available.

Sensitivity to mechanical impact

Not available.

Hazardous combustion products

Not available.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.

Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Runoff from fire control or dilution water may cause pollution.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Minimize dust generation and accumulation. Should not be released into the environment. Large Spills: Use clean non-sparking tools to collect absorbed material. Collect dust using a vacuum cleaner equipped with HEPA filter. Following product recovery, flush area with water. Small Spills: Clean surface thoroughly to remove residual contamination. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS. Send to refiner for silver recovery.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing dust. Avoid prolonged exposure. Do not get this material on clothing. Avoid release to the environment. Practice good housekeeping.
Storage	Keep away from heat and sources of ignition. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Protect from light.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Material	Type	Value
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S. (CAS 7783-97-3)	TWA	0.01 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Material	Type	Value
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S. (CAS 7783-97-3)	TWA	0.01 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S. (CAS 7783-97-3)	STEL	0.03 mg/m3
	TWA	0.01 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Material	Type	Value
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S. (CAS 7783-97-3)	TWA	0.01 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S. (CAS 7783-97-3)	PEL	0.01 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
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Engineering controls	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. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.
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Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	Wear suitable protective clothing.
Respiratory protection	Wear respirator with dust filter.
Hand protection	Wear appropriate chemical resistant gloves.

9. Physical & Chemical Properties

Appearance

Physical state	Solid.
Form	Powder.
Color	White.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	0.3 g/l
Specific gravity	5.5
Relative density	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	Not available.
Partition coefficient (n-octanol/water)	Not available.
Molecular weight	282.80 g/mol
Molecular formula	AgIO ₃

10. Chemical Stability & Reactivity Information

Chemical stability	Decomposes on heating.
Conditions to avoid	Exposure to light. Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Not available.
Hazardous decomposition products	May include oxides of silver.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data	No data available.
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Acute effects	The toxicological properties of this material have not been fully investigated and its handling and use may be hazardous.
Sensitization	Not available.
Local effects	Inhalation of dusts may cause respiratory irritation.
Chronic effects	Not expected to be hazardous by WHMIS criteria. Prolonged inhalation may be harmful.
Carcinogenicity	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/irritation	Dust in the eyes will cause irritation. May irritate eyes.
Mutagenicity	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.
Symptoms and target organs	Irritation of eyes. Upper respiratory tract irritation.
Synergistic materials	Not available.

12. Ecological Information

Ecotoxicological data	No ecotoxicity data noted for the ingredient(s).
Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Aquatic toxicity	Not available.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

UN number	UN1479
UN proper shipping name	OXIDIZING SOLID, N.O.S. (SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S.)
Transport hazard class(es)	
Class	5.1
Subsidiary risk	-
Packing group	II
Environmental hazards	•
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1479
UN proper shipping name	Oxidizing solid, n.o.s. (SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S.)
Transport hazard class(es)	
Class	5.1
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	5L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

UN number UN1479

UN proper shipping name OXIDIZING SOLID, N.O.S. (SILVER, WATER-SOLUBLE COMPOUNDS, N.O.S.)

Transport hazard class(es)

Class 5.1

Subsidiary risk •

Packing group II

Environmental hazards

Marine pollutant No.

EmS F-A, S-Q

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

IATA; TDG**15. Regulatory Information****Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

C - Oxidizing

WHMIS labeling**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 2

NFPA ratings

Health: 1
Flammability: 0
Instability: 0
Special hazards: OX

Disclaimer

GFS Chemicals cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Prepared by

Not available.

This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.