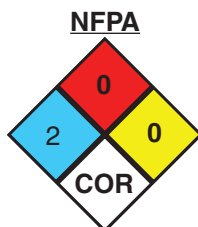


MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate



HMIS

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	J

1. Product And Company Identification

Supplier

DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800

FAX Number: 847-869-2531

E-mail: goldchem@aol.com

Web Site: www.dfgoldsmith.com

Manufacturer

DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800

FAX Number: 847-869-2531

E-mail: goldchem@aol.com

Web Site: www.dfgoldsmith.com

Supplier Emergency Contacts & Phone Number

Chemtrac: 800-424-9300

Supplier Emergency Contacts & Phone Number

Chemtrac: 800-424-9300

Issue Date: 02/09/2005

Product Name: Sodium Gold Thiosulfate (I) Hydrate

Chemical Name: Sodium Dithiosulfatogold (I), Sodium Gold Thiosulfate, Auric Sodium Thiosulfate

CAS Number: 10233-88-2

Chemical Family: Group 1B Metal Salts

Chemical Formula: $\text{Na}_3 [\text{Au}(\text{S}_2\text{O}_3)_2] \cdot 2\text{H}_2\text{O}$

MSDS Number: 79-251

Product Code: 79-251

Synonyms

Sodium Dithiosulfatogold (I), Sodium Gold Thiosulfate, Auric Sodium Thiosulfate

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Sodium Dithiosulfatogold (I)/Sodium Gold Thiosulfate	10233-88-2	93

EMERGENCY OVERVIEW

To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid exposure to moist air, elevated temperatures, and sunlight. Product incompatible with halogens, acids, lead, silver, and mercury salts. Can decompose toxic fumes of sulfur oxides.

Hazards Identification (Pictograms)



MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

3. Hazards Identification

Primary Routes(s) Of Entry

Eyes	Likely
Skin	Likely
Inhalation	Likely
Ingestion	Likely

Eye Hazards

Causes eye irritation.

Skin Hazards

Causes skin irritation.

Ingestion Hazards

Irritation, nausea and diarrhea. Does not cause serious toxic manifestations.

Inhalation Hazards

May cause respiratory tract irritation.

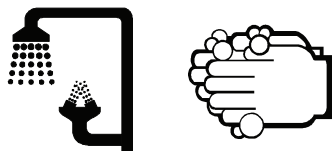
Conditions Aggravated By Exposure

May cause irritation of the respiratory system. Maintain housekeeping and personal hygiene to minimize exposure and prevent sensitization.

Conditions Aggravated By Overexposure

To the best of our knowledge, the chemical, the physical, and toxicological properties have not been thoroughly investigated.

First Aid (Pictograms)



4. First Aid Measures

Eye

Flush for 15 minutes with plenty of water. If discomfort occurs or persists, contact a physician.

Skin

Flush area for 15 minutes with water and wash with soap and water. If discomfort occurs or persists, contact a physician. Remove contaminated clothing and shoes and wash before reuse.

Ingestion

Not expected to be a problem in industry. However if swallowed and discomfort occurs, contact a physician.

Inhalation

Remove to fresh air immediately. If discomfort occurs or persists, contact a physician.

Fire Fighting (pictograms)



MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

5. Fire Fighting Measures

Flash Point Method: NA

Flammability Class: NA

Fire And Explosion Hazards

Use proper equipment. Can decompose to emit toxic fumes of sulfur oxides.

Extinguishing Media

Use water spray, foam, carbon dioxide or medium to fight primary source.

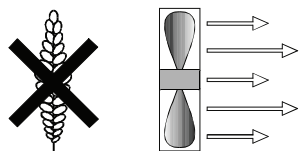
Fire Fighting Instructions

Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Soak up and place in sealed container for disposal or reclamation. Person protected with full face shield and approved respirator and cartridge for chlorine vapor and dust. Ventilate area and wash spill site after pick up is completed.

Handling & Storage (Pictograms)



7. Handling and Storage

Handling And Storage Precautions

Avoid breathing dust. Avoid contact with eyes, prolonged or repeated contact with skin. Use compatible chemical resistant gloves. Wash hands thoroughly after handling.

Handling Precautions

Avoid breathing dust or solution spray. Avoid contact with eyes. Avoid contact with skin and clothing. Wash thoroughly after handling.

Storage Precautions

Do not store directly on ground. Store in a dry place.

Work/Hygienic Practices

Use good personal hygiene. Wash thoroughly after handling. Wash thoroughly with soap and water after handling.

Other Precautions

0.01 ppm high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 ppm same as above with full face piece; 1 ppm powdered air purifying respirator with high efficiency filter/type C supplied air respirator operated in pressure demand mode. Store in a sealed container, plastic or plastic liner, in a cool, well ventilated, dry area away from volatile acids.

Protective Clothing (Pictograms)



MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

8. Exposure Controls/Personal Protection

Engineering Controls

Ventilation: Local Exhaust: Required in handling area
Mechanical: Desirable to insure concentration of material below TLV/TWA levels
Other: Closed Ventilation system (Laboratory Fume Hood)

Eye/Face Protection

ANSI approved safety glasses/goggles

Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves).

Respiratory Protection

Chemical cartridge respirator for dust/mist/fume/radionuclide or self-contained breathing apparatus with full face shield.

Other/General Protection

Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygiene facilities for washing.

9. Physical And Chemical Properties

Appearance

White to off-white crystals/powder

Odor

Slight odor of sulfur

Chemical Type: Mixture

Physical State: Solid

Melting Point: Decomposes °C

Boiling Point: NA °C

Specific Gravity: 3.09

Molecular Weight: 530.2

Vapor Pressure: NA

Vapor Density: NA

pH Factor: NA

Solubility: 50 g/100 ml

Evaporation Rate: NA

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Moist air, elevated temperature, and sunlight.

Incompatible Materials

Halogens, acids, lead, silver, and mercury salts

Hazardous Decomposition Products

Toxic fumes of sulfur oxides.

MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

11. Toxicological Information
No Data Available...
12. Ecological Information
No Data Available...
13. Disposal Considerations
Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.
14. Transport Information
<u>Proper Shipping Name</u> Corrosive liquid, n.o.s.
<u>Hazard Class</u> 8
<u>Secondary Hazard Class</u> NA
<u>DOT Identification Number</u> 1760
<u>DOT Shipping Label</u> Corrosive liquid, n.o.s.
<u>Freight Class</u> See 49 CFR
<u>Packaging Exceptions</u> See 49 CFR
<u>Packaging Requirements</u> See 49 CFR
<u>Additional Shipping Paper Description</u> IATA: Same as DOT regulations. Review current IATA regulations before shipping.
<u>DOT (Pictograms)</u>

<u>ADR - Europe (Pictograms)</u>


MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

TDG - Canada (Pictograms)



15. Regulatory Information

U.S. Regulatory Information

TSCA: This product is TSCA listed.

15. Regulatory Information (cont)

U.S. Regulatory Information

This chemical is not TSCA listed.

Canadian Regulatory Information

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.

European Union (EU) Regulatory Information

Symbol of Danger: C

Indication of Danger: Corrosive

R: 34, 36, 37

Risk Statements: Causes burns, Irritating to eyes, Irritating to respiratory system.

S: 17 26 27 36/37 39 45

Safety Statements: Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately.

WHMIS - Canada (Pictograms)



16. Other Information

NFPA Rating

Health: 2

Fire: 0

Reactivity: 0

Other: COR

HMIS Rating

Health: 2

Fire: 0

Reactivity: 0

Personal Protection: J

MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate

16. Other Information (cont)

Revision/Preparer Information

MSDS Preparer: DF Goldsmith Chemical and Metal

MSDS Preparer Phone Number: 847-869-7800

This MSDS Supersedes A Previous MSDS Dated: 03/15/1998

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 C.F.R 1910.1200, we are providing you with a Materials Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

It is your responsibility to educate your employees on the safe use of the hazardous material. With this in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and copy should be retained in your files for future reference.

DF Goldsmith Chemical and Metal makes no presentation as to the accuracy of the information in the MSDS. The information is believed to be correct; however, you (the customer), should perform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.

MATERIAL SAFETY DATA SHEET

Sodium Gold Thiosulfate (I) Hydrate