

# MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

## 1. Chemical Product and Company Identification

**Product Name:** STERLING Rapid Silver Stain  
Reagent A

**Product Number:** EC-720A

### Chemical Names/

#### Description:

Mixture of oxidant, silver salt, and metal complex.

### Manufacturer

National Diagnostics  
305 Patton Drive  
Atlanta, GA 30336

### Telephone Numbers

(800) 526-3867  
(404) 699-2121

### Emergency Numbers

#### Chemtrec

**(800) 424-9300 (U.S. & Canada)**  
**01-703-527-3887 (outside U.S. & Canada)**

## 2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #
Proprietary Silver Salt		Flammable Limits	N.A.
Flash Point Method	N.A.	Autoignition temperature	N.A.

### Extinguishing media

Use media appropriate to the primary cause of fire.

### Protective Equipment

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### Hazardous Combustion Products

Oxides of nitrogen and carbon.

### Unusual Fire and Explosion Hazards

Reacts with organics to produce flammable products. Reacts with reducing agents.

NFPA Codes: Health N.A. Flammability N.A. Reactivity N.A.

## 6. Accidental Release Measures

### Steps to be taken in case material is released or spilled

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

### **Waste Disposal Method**

Disposal must be made in accordance with applicable federal, state, and local regulations.

### **Personal Precautions**

Wear appropriate protective equipment as specified in section 8.

## **7. Handling and Storage**

### **Handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

### **Storage**

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials (section 10).

### **Storage Temperature**

Room Temperature

### **Disposal**

Observe all national, state, and local regulations regarding disposal.

## **8. Exposure Controls/Personal Protection**

### **Airborne Exposure Limits**

Component: Proprietary Silver Salt

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

### **Engineering Controls**

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

### **Respiratory Protection**

For conditions of use where exposure to the substance is apparent, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

### **Eye Protection**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### **Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Other Control Measures**

There is insufficient data in the published literature to assign complete numerical safety ratings and laboratory protective equipment for this product. Special precautions must be used in storage, use and handling.

## 9. Physical Properties

<b>Boiling point</b>	212 F	<b>Evaporation Rate</b>	1.0 (H2O = 1)
<b>Melting point</b>	N.A.	<b>Solubility in water</b>	Soluble
<b>Vapor pressure (mmHg)</b>	N.A.	<b>pH</b>	4-5
<b>Vapor density (Air = 1)</b>	N.A.	<b>Specific gravity (H2O = 1)</b>	1.01 (H2O = 1)
<b>% Volatile by volume</b>	99		

## 10. Stability and Reactivity

### Stability

Stable under ordinary conditions of use and storage.

### Conditions to Avoid

Heat, flames, ignition sources, and incompatibles.

### Hazardous Decomposition Products

Emits hazardous oxides of nitrogen and carbon when heated to decomposition.

### Hazardous Polymerization

Will not occur

### Incompatibles

Proprietary Silver Salt:

Ammonia, alkalis, antimony salts, arsenites, bromides, carbonates, chlorides, iodides, thiocyanates, ferrous salts, phosphates, tannic acid, and tartrates.

Proprietary Metal Complex:

Strong bases.

Proprietary Nitrate:

Aluminum, antimony, chromium, copper, iron, lead, magnesium, manganese, nickel, zinc, brass, oil, charcoal, organic material, acetic acid, ammonium chloride, bismuth, cadmium, chlorides, cobalt, phosphorus, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium perchlorate, sodium-potassium alloy, and sulfur.

## 11. Toxicological Information

### Product LD50 Values

STERLING Rapid Silver Stain Reagent A	Oral Rat LD50 (mg/kg):	>5000 mg/kg
STERLING Rapid Silver Stain Reagent A	Dermal Rabbit LD50 (mg/kg):	>5000 mg/kg

### Component Cancer List Status

NTP Carcinogen

	Known	Anticipated	IARC Category
Proprietary Silver Salt	No	No	No
Proprietary Metal Complex	No	No	No
Proprietary Nitrate	No	No	No

## 12. Ecological Information

### Proprietary Silver Salt

No information found.

### Proprietary Metal Complex

No information found.

### Proprietary Nitrate

When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade.

## 13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

## 14. Transport Information

### D.O.T.

Proper Shipping Name: Corrosive Liquid, Acidic, inorganic, N.O.S.

Hazard Class: 8

UN Number: 3264

Packing Group: III

### I.A.T.A.

Proper Shipping Name: Corrosive Liquid, Acidic, inorganic, N.O.S.

Hazard Class: 8

UN Number: 3264

Packing Group: III

### I.M.O.

Proper Shipping Name: Corrosive Liquid, Acidic, inorganic, N.O.S.

Hazard Class: 8

UN Number: 3264

Packing Group: III

## 15. Regulatory Information

### United States

#### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

#### SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Proprietary Silver Salt	No	No	Yes	Yes	Yes
Proprietary Metal Complex	No	No	No	Yes	Yes

Proprietary Nitrate                      No              No              Yes              Yes              No

**Europe**

**EEC Regulatory**

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

**NFPA Codes:    Health   N.A.    Flammability   N.A.    Reactivity   N.A.**

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