

Revision Number: 003.0

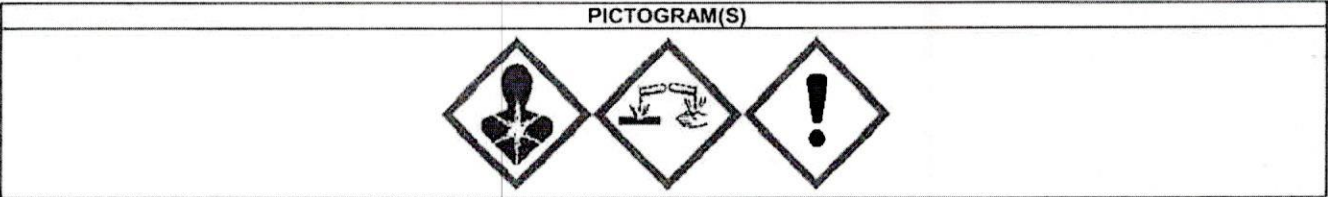
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE S-AD 31A ACID INHIBITOR ADDITIVE known as RODINE 31A  
Product type: Corrosion inhibitor  
Restriction of Use: None identified  
Company address: RESEARCH PRODUCTS, INC. 6311 HIGHWAY 90 W. THEODORE, AL. 36590 251-653-0030  
IDH number: 593979  
Region: United States  
Contact information: Telephone: (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW  
DANGER: MAY BE CORROSIVE TO METALS. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE CANCER.

HAZARD CLASS	HAZARD CATEGORY
CORROSIVE TO METALS	1
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
CARCINOGENICITY	1A



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. Use personal protective equipment as required.  
Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. IF exposed or concerned: Get medical attention. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.  
Storage: Store locked up. Store in corrosive resistant container with a resistant inner liner.  
Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
1,3-Diethyl-2-thiourea	105-55-5	10 - 30
Sulfuric acid	7664-93-9	10 - 30

\* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.
Skin contact:	Remove contaminated clothing and footwear. For skin contact flush with large amounts of water. If symptoms develop and persist, get medical attention.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Get immediate medical attention. Do not induce vomiting. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Use media appropriate for surrounding material.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	This product is an aqueous mixture which will not burn. May react with metals to form flammable hydrogen gas.
Hazardous combustion products:	Irritating and toxic gases or fumes may be released during a fire. Upon decomposition, this product emits oxides of sulfur, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
Clean-up methods:	Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.



## 7. HANDLING AND STORAGE

### Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. For industrial use only. NEVER ADD WATER TO PRODUCT. For dilutions, add product slowly to water while stirring. Use caution; heat may be generated.

### Storage:

For safe storage, store between 14 °F (-10°C) and 104 °F (40°C)  
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
1,3-Diethyl-2-thiourea	None	None	None	None
Sulfuric acid	0.2 mg/m3 TWA Thoracic fraction.	1 mg/m3 PEL	None	None

### Engineering controls:

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

### Respiratory protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

### Eye/face protection:

Wear chemical goggles; face shield (if splashing is possible).

### Skin protection:

Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical state:

Liquid

### Color:

Dark brown

### Odor:

Pungent

### Odor threshold:

Not available.

### pH:

< 2

### Vapor pressure:

Not determined

### Boiling point/range:

> 100 °C (> 212°F)

### Melting point/ range:

-23 °C (-9.4 °F)

### Specific gravity:

1.13 - 1.16 at 60 °F (15.56 °C)

### Vapor density:

Not determined

### Flash point:

Not applicable

### Flammable/Explosive limits - lower:

Not applicable

### Flammable/Explosive limits - upper:

Not applicable

### Autoignition temperature:

Not applicable

### Evaporation rate:

Not determined

### Solubility in water:

Complete

### Partition coefficient (n-octanol/water):

Not determined

### VOC content:

Not applicable

### Viscosity:

223 cp

### Decomposition temperature:

Not available.

## 10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits oxides of sulfur, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Incompatible materials:	Keep away from organic, alkaline, and oxidizing materials, metallic powders, chromates, chlorates, nitrates, and carbides.
Reactivity:	Not available.
Conditions to avoid:	Store away from incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

### Potential Health Effects/Symptoms

Inhalation:	Mists, vapors or liquid may cause severe irritation or burns. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination.
Skin contact:	Corrosive to the skin. Contact with the skin or mucous membranes may cause severe irritation and burns. This product may cause an allergic skin reaction. A component in this product may be absorbed through the skin in harmful amounts.
Eye contact:	This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
Ingestion:	This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. May cause dizziness, incoordination, headache, nausea, and vomiting.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
1,3-Diethyl-2-thiourea	Oral LD50 (RAT) = 316 mg/kg	Irritant, Allergen
Sulfuric acid	Inhalation LC50 (RAT, 1 h) = 347 mg/l	Carcinogen, Corrosive, Irritant, Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
1,3-Diethyl-2-thiourea	No	No	No
Sulfuric acid	Known To Be Human Carcinogen.	Group 1	No

## 12. ECOLOGICAL INFORMATION

Ecological information: Harmful to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:	Follow all local, state, federal and provincial regulations for disposal. This product contains a alkylphenol or nonylphenol ethoxylate.
Hazardous waste number:	This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002).

### 14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

#### U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Sulfuric acid
Hazard class or division:	8
Identification number:	UN 2796
Packing group:	II
DOT Hazardous Substance(s):	Sulfuric acid

#### International Air Transportation (ICAO/IATA)

Proper shipping name:	Sulphuric acid
Hazard class or division:	8
Identification number:	UN 2796
Packing group:	II

#### Water Transportation (IMO/IMDG)

Proper shipping name:	SULPHURIC ACID
Hazard class or division:	8
Identification number:	UN 2796
Packing group:	II

### 15. REGULATORY INFORMATION

#### United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	Sulfuric acid (CAS# 7664-93-9).
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health, Reactive
CERCLA/SARA Section 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Sulfuric acid (CAS# 7664-93-9).
CERCLA Reportable quantity:	Sulfuric acid (CAS# 7664-93-9) 1,000 lbs. (454 kg)
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
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### 16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by:	Jennifer Mckay, Regulatory Affairs Specialist
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IDH number: 593979

Product name: BONDERITE S-AD 31A ACID INHIBITOR ADDITIVE known as RODINE 31A  
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