

# Safety Data Sheet

## 1. Product and Company Information

**Product Name:** Ez Stain Reverse

**Product Code:** AE-1310

### Company Information

**Company Name :** ATTO Corporation

**Address :** 3-2-2 Motoasakusa, Taito-ku, Tokyo 111-0041, Japan

**Department in Charge :** Headquarters, Customer Service Department

**Phone Number :** +81-3-5827-4861

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**Emergency Contact :** +81-3-5827-4863

### Recommended Use

For research use only.

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## 2. Hazards Identification

### R-1 Solution

### GHS Classification

Skin corrosion/irritation : Category 1

Serious eye damage/eye irritation : Category 1

Reproductive toxicity : Category 1B

Specific target organ toxicity (single exposure) : Category 2 (Central nervous system, gastrointestinal tract)

Hazardous to the aquatic environment (acute) : Category 3

**Signal Word**

Danger

**Hazard Statements**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child.

H371 May cause damage to the central nervous system and gastrointestinal tract.

H402 Harmful to aquatic life.

**Precautionary Statements****Prevention**

P201 Obtain special instructions before use.

P260 Do not breathe mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a doctor.

**Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national regulations.

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**R-2 Solution****GHS Classification**

Serious eye damage/eye irritation : Category 1

Specific target organ toxicity (single exposure) : Category 2 (Gastrointestinal tract)

Hazardous to the aquatic environment (acute) : Category 1

Hazardous to the aquatic environment (chronic) : Category 1

**Signal Word**

Danger

**Hazard Statements**

H318 Causes serious eye damage.

H371 May cause damage to the digestive tract.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements****Prevention**

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P310 Immediately call a doctor.

**Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national regulations.

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### 3. Composition / Information on Ingredients

**Substance or mixture:** Mixture (aqueous solution)

This product consists of two solutions: **R-1 Solution** and **R-2 Solution**.

**R-1 Solution**

Component	Concentration	Chemical Formula	CAS No.
Boric acid	8%	H3BO3	10043-35-3
Sodium dodecyl sulfate	0.6%	CH3(CH2)11OSO3Na	151-21-3
Imidazole	6%	C3H4N2	288-32-4

**R-2 Solution**

Component	Concentration	Chemical Formula	CAS No.
Zinc sulfate heptahydrate	26%	ZnSO4·7H2O	7446-20-0

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## 4. First Aid Measures

### General Advice

If exposed or concerned, seek medical advice/attention.

### R-1 Solution

#### Inhalation

Move the affected person to fresh air and keep warm and at rest. If symptoms persist, seek medical attention.

#### Skin Contact

Wash thoroughly with plenty of water and soap. If irritation or inflammation occurs, seek medical attention.

#### Eye Contact

Rinse immediately with plenty of clean water for at least 15 minutes. Seek medical attention if symptoms occur.

#### Ingestion

Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek immediate medical attention.

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### R-2 Solution

#### Inhalation

Move the affected person to fresh air and keep warm and at rest. If symptoms persist, seek medical attention.

#### Skin Contact

Wash thoroughly with plenty of water and soap. Seek medical attention if irritation occurs.

#### Eye Contact

Immediately rinse with plenty of clean water for at least 15 minutes and seek immediate medical attention.

**Ingestion**

Rinse mouth. Do not induce vomiting. Drink plenty of water. If symptoms occur, seek medical attention.

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## 5. Fire-fighting Measures

**Suitable extinguishing media**

This product is non-combustible. Use extinguishing media appropriate for the surrounding fire.

**Specific hazards arising from the chemical**

When heated, R-2 solution may generate zinc oxide fumes that may cause metal fume fever.

**Fire-fighting methods**

Move containers away from the fire area if it can be done safely. If containers cannot be moved, cool with water spray.

**Special protective equipment for firefighters**

Firefighters should wear appropriate protective equipment including self-contained breathing apparatus.

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## 6. Accidental Release Measures

**Personal precautions**

Ensure adequate ventilation until cleanup is completed. Restrict access to the spill area. Wear appropriate protective equipment.

**Environmental precautions**

Prevent the product from entering rivers, waterways, or soil.

**Methods for containment and cleanup****R-1 Solution**

Collect the spilled material and wash the area with soda ash solution, followed by rinsing with plenty of water.

**R-2 Solution**

Sweep up the spilled material and collect it in a sealed container. Treat the contaminated area with slaked lime or soda ash solution.

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## 7. Handling and Storage

### Handling

Avoid rough handling such as dropping, tipping, or dragging containers. Prevent leaks, spills, and splashes. Avoid generating vapours or mist unnecessarily.

Wash hands and face thoroughly after handling.

Wear appropriate protective equipment. Use local exhaust ventilation when handling indoors.

### Storage

Store in a cool, well-ventilated place away from direct sunlight. Keep containers tightly closed and store locked up.

### Incompatible materials

R-1 Solution : Alkaline carbonates and hydroxides

R-2 Solution : Strong oxidizing agents

### Container materials

Glass, polyethylene, polypropylene.

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## 8. Exposure Controls / Personal Protection

### Engineering controls

Provide local exhaust ventilation. Install safety showers and eye-wash stations near the handling area.

**Occupational exposure limits**

Not established.

**Personal protective equipment**

Respiratory protection : Dust mask or respirator as appropriate

Hand protection : Protective gloves

Eye protection : Safety goggles or face shield

Skin protection : Protective clothing and boots

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**9. Physical and Chemical Properties**

Physical state : Liquid

Appearance : Transparent liquid

Odor : Odorless

pH : No data available

Boiling point : No data available

Melting point : No data available

Solubility : No data available

Other data : None

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**10. Stability and Reactivity****Stability**

Stable under recommended storage conditions.

**Reactivity**

R-1 Solution :

Dehydrates at elevated temperatures forming metaboric acid and boron oxide.

R-2 Solution :

Stable.

**Conditions to avoid**

Heat and direct sunlight.

**Incompatible materials**

See Section 7.

**Hazardous decomposition products**

No data available.

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## 11. Toxicological Information

### R-1 Solution

**Acute toxicity**

Oral LD50 (rat): 2660 mg/kg

**Skin irritation**

Severe erythema and mild necrosis observed in animal tests.

**Reproductive toxicity**

Effects on fertility and development have been observed in animal studies.

**Specific target organ toxicity (single exposure)**

May affect the nervous system and gastrointestinal tract.

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### R-2 Solution

**Acute toxicity**

Oral LD50 (rat): 1260 mg/kg

**Skin irritation**

May cause mild skin irritation.

**Eye damage**

Causes redness and pain.

Specific target organ toxicity  
May cause respiratory irritation.

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## 12. Ecological Information

### R-1 Solution

Fish toxicity  
Medaka LC50 > 500 mg/L (96 h)

Bioaccumulation  
Low bioaccumulation potential.

### R-2 Solution

Aquatic toxicity  
Crustacean LC50 (48 h): 0.095 mg/L

Very toxic to aquatic life with long lasting effects.

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## 13. Disposal Considerations

Dispose of waste in accordance with local regulations.

R-1 Solution  
Neutralize with soda ash after dilution with water.

R-2 Solution  
Precipitate using slaked lime or soda ash and dispose appropriately.

Contaminated containers should be disposed of according to applicable regulations.

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## 14. Transport Information

### R-1 Solution

#### International Regulations

##### IATA / ADR / DOT-US / IMDG

Classified as dangerous goods according to transport regulations.

UN number : **UN3098**

UN proper shipping name : **OXIDIZING LIQUID, CORROSIVE, N.O.S. (Organic Heterocyclic Alkaloid Compound)**

Transport hazard class(es) : **5.1 (8)**

Packing group : **III**

Environmental hazards : Not applicable

Special precautions for user : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code :  
Not applicable.

#### Special Transport Provisions

This product is subject to **UN Special Provision A197 (375)**.

Substances transported in **single or combination packagings containing a net quantity of 5 L or less for liquids**, are **not subject to other provisions of these Regulations**, provided that the packagings comply with the general provisions of **5.0.2.4.1, 5.0.2.6.1.1, and 5.0.2.8**.

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### R-2 Solution

#### International regulations

##### IATA / ADR / DOT-US / IMDG

Classified as dangerous goods according to transport regulations.

UN number : **UN3082**

UN proper shipping name : **ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S. (Zinc sulfate)**

Transport hazard class(es) : **9**

Packing group : **III**

Environmental hazards : **Applicable**

Special precautions for user : Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code :  
Not applicable.

### **Special transport provisions**

This product is subject to **Special Provision 375**.

Substances that are carried in single or combination packagings containing a net quantity of **5 L or less for liquids** are **not subject to any other provisions of these Regulations**, provided that the packagings meet the general provisions for packaging, marking, and documentation.

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## **15. Regulatory Information**

### Japanese Regulations

#### PRTR Law

R-1 Solution : Class I Designated Chemical Substance No.405

R-2 Solution : Class I Designated Chemical Substance No.1

#### Industrial Safety and Health Act

Applicable.

#### Poisonous and Deleterious Substances Control Act

Not applicable.

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## 16. Other Information

This SDS is based on the latest available information and may be revised as new data become available.

The precautions described herein apply only to normal handling conditions. If the product is used under special conditions, appropriate safety measures should be implemented.

While the information provided in this SDS is believed to be accurate, ATTO Corporation makes no warranty regarding its completeness or accuracy.