SAFETY DATA SHEET
According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

EARTH SCIENCE LABORATORIES, INC.
903 N 47th St., Suite 105
Rogers, AR 72756
earthsciencelabs.com

Emergency Phone Number: 1-800-535-5053 (Infotrac)
Information Phone Number: 1-800-962-1492

Material Name: *MetalShield*™

Issue Date: 01/2018
Revision Date: 01/2020

Section 1 – PRODUCT IDENTIFICATION

Product Name: MetalShield™

Manufactured by: Earth Science Laboratories, Inc.
903 N 47th St., Suite 105
Rogers, AR 72756

Section 2 – HAZARDOUS INGREDIENTS

Components	CAS#	OSHA PEL	ACGIH TLV	%
Trade Secret*	Component B		Trade Secret*	

*Per O.S.H.A. definition also known as 50 Fed. Reg. 48750

Section 3 – HEALTH HAZARDS IDENTIFICATION

Classification

Acute toxicity - Inhalation	**Category 4**
Skin corrosion/irritation	**Category 1**
Serious eye damage/eye irritation	**Category 1**

Symbol(s)

Primary Routes of Entry: *Inhalation, Absorption, and Ingestion.*
Eyes: *Corrosive*. Exposure may cause severe burns, destruction of eye tissue and possible permanent injury or blindness.
Skin: *Corrosive*. Contact may cause reddening, itching, inflammation, burns, blistering and possibly tissue damage.
Ingestion: *Corrosive.* May cause painful irritation and burning of the mouth and throat, painful swallowing, labored breathing, burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection.
Inhalation: *Irritating.* Overexposure may cause burns and tissue damage.

Section 4 – FIRST AID MEASURES

Eyes: Flush immediately with large amounts of water for at least 20 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.
Skin: Immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Get immediate medical attention.
Ingestion: If victim is conscious and alert, give 1-3 glasses of water to dilute stomach contents. Rinse mouth out with water. Do not induce vomiting unless directed by medical personnel. Get immediate medical attention.
Inhalation: Remove to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Keep affected person warm and at rest. Get immediate medical attention.

Section 5 – FIRE AND EXPLOSION HAZARDS

Flash Point: N/E **UFL:** N/E **LFL:** N/E

General Fire Hazards: Water applied directly could result in spattering of acid solution.
Hazardous Combustion Products: May react with high carbon metals to produce hydrogen gas, which can form an explosive mixture.
Fire Fighting Equipment/Instructions: Firefighters must wear MSHA/NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

NFPA Ratings:	**Fire:** 0	**Health:** 2	**Reactivity:** 1	**Other:** X
HMIS III Ratings:	**Fire:** 0	**Health:** 2	**Reactivity:** 1	**Personal Protection:** X

Section 6 – ACCIDENTAL RELEASE MEASURES

Containment Procedures: Flush with water into retaining area or container. Caution should be exercised regarding personal safety and exposure to released product.
Clean-Up Procedures: Neutralize solution with bicarbonate of soda. Neutralize with 20 parts water to 1 part MetalShield™ to bring PH to >4.0.
Evacuation Procedures: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind.
Special Instructions: Notify local authorities and the National Response Center, if required.

Section 7 – HANDLING AND STORAGE

Procedures for Handling: Avoid contact with strong oxidizers. Do not use with materials or equipment sensitive to corrosive solutions.

Storage: Store in a safe place away from pets. KEEP OUT OF THE REACH OF CHILDREN. Store away from excessive heat. Metal Shield will freeze, always store above 20° F. Always keep container closed. Never store Metal Shield in any other container than its original container. Bulk Metal Shield shall be stored and handled in fiberglass, PVC, polypropylene or plastic equipment. Keep away from galvanized piping and long term nylon storage. Container should be nonreactive to Inorganic acids.

Section 8 – PERSONAL PROTECTION

Respiratory Protection: Ventilation and other forms of engineering controls are the preferred means for controlling exposures. A NIOSH/ MSHA approved air-purifying respirator with an appropriate acid gas cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.
Protective Gloves: Use appropriate chemical gloves that are in usable order.
Other Protective Clothing or Equipment: Eye and face protection is necessary, long sleeved shirts, long pants, socks and shoes.
Work/Hygienic Practices: Use good personal hygiene. Body shower for prolonged skin contact.

Section 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance: Clear liquid
Physical State: Liquid
pH: <1
Vapor Pressure: 0.1mm 68º F
Boiling Point: 224.2º F
Melting Point: N/A
Odor: Odorless
Vapor Density (Air=1): 1.0
Evaporation Rate: N/A
Solubility in Water: Complete
Specific Gravity (H_20=1): 1.371+/- 0.006

Section 10 – REACTIVITY INFORMATION

Chemical Stability: Stable.
Conditions to Avoid: Avoid mixing with strong bases and strong reducing agents.
Incompatibility: Incompatible with strong bases and strong reducing agents.
Hazardous Decomposition Products: Sulfur dioxide and sulfur trioxide may be produced with decomposition.
Hazardous Polymerization: Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity / Chronic Toxicity: Continued overexposure to this solution may cause systemic toxicity.
Carcinogenicity: N/A
Signs and Symptoms of Exposure: Overexposure may cause the following specific symptoms, depending on the concentration and duration of exposure: vomiting, shallow respiration and lung function changes.

Section 12 – ECOLOGICAL INFORMATION

Water treaded with this product may be hazardous to aquatic organism.

Section 13 – DISPOSAL CONSIDERATIONS

Disposal Instructions: Neutralize with bicarbonate of soda or fertilizer grade lime and dispose of in accordance with all federal, state and local regulations.

Section 14 – TRANSPORTATION INFORMATION

DOT Information

Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s., (contains orthophosphoric acid)
Hazard Class: 8
UN/NA #: UN3264
Packing Group: II

- *Packages that contain less than 4.0 liters could be **ORM-D***
- *The proper shipping information is the responsibility of the shipper and this information is only guidelines.*

Section 15 – REGULATORY INFORMATION

Primary Routes of Entry: *Inhalation, Absorption, and Ingestion.*
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Section 16 – OTHER INFORMATION

Date of Last Revision: January 2020