

Safety Data Sheet (SDS)

Section 1: Identification

Product identifier: Prior-Austenite Grain Boundaries Etch with Hydrochloric Acid

Other name(s):

Item number(s): 118 with hydrochloric acid option

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet:

ES Laboratory, LLC
2041 E. Gladstone St. Unit N Glendora, CA 91740 USA
Tel: 626-208-9011

Emergency telephone number:

CHEMTREC® 1-800-424-9300 (US & Canada Only)

Section 2: Hazard(s) Identification

Hazardous classification of the substance or mixture:

Hazard Class	Category code
Corrosive to metals	1

Signal word: Warning

Pictogram:



Hazard statement(s):

H290 May be corrosive to metals.

Precautionary statement(s):

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

Response statement(s): None

Storage statement(s):

P404 Store in a closed container.
P411 Store at a temperature between 15-30 °C.

Disposal statement(s):

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

Hazard(s) not otherwise classified: None

Label elements: see tables above.

Section 3: Composition/Information on Ingredients

Component	CAS No.	Concentration (wt%)
Water	7732-18-5	Balance
Picric acid	88-89-1	2-4 %
Sodium dodecylbenzene sulfonate	25155-30-0	<1%
Hydrochloric acid	7647-01-0	Approx. 1%

Any concentration shown as a range is to protect the confidentiality or is due to batch variation. Only hazardous components are shown.

Section 4: First-Aid Measures

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical aid immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

Skin contact: Wash the areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. Skin stains may be removed using reagent alcohol or dilute Ammonium Hydroxide Solution. Get medical aid immediately.

Ingestion: Rinse mouth. Get medical aid immediately.

Most important symptoms and effects, both acute and delayed: May stain skin.

Recommendation for immediate medical care and special treatment needed, when necessary: No information.

Section 5: Fire-Fighting Measures

Extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special hazards arising from the substance or mixture: In the case of fire, it might release carbon oxides and nitrogen oxides.

Special protective equipment or precautions for firefighters: Wear full protective clothing and a self-contained respirator.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources.

Environmental precautions: Do not allow the material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up: Absorb with a liquid binding material (sand, diatomite, acid binder, universal binders, sawdust). Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Keep away from ignition sources.

Section 7: Handling and Storage

Precautions for safe handling: Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practices.

Condition for safe storage: Keep container tightly sealed. Keep material wet with water. Do not allow material to dry. Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatibilities: Strong oxidizing agents. Strong bases. Strong reducing agents. Metals.

Specific storage requirement(s): This product contains a small amount of dissolved picric acid. Do not allow it to dry completely. Dried picric acid crystal is not stable and may detonate. Inspect the content periodically. Add water as needed. Dispose of content as hazardous waste within one year of initial receipt.

Section 8: Exposure Controls/Personal Protection

Exposure Limits

Component	CAS No.	ACGIH TLV	OSHA PEL
Picric Acid	88-89-1	0.1 mg/m ³ TWA	0.1 mg/m ³ TWA skin
Sodium dodecylbenzene sulfonate	25155-30-0	No information	No information
Hydrochloric acid	7647-01-0	C 5 ppm	C 5 ppm

Engineering controls: Emergency showers, eyewash stations, ventilation systems.

Eye protection: Wear safety glasses or goggles.

Skin protection: Wear protective clothing and chemical-resistant gloves.

Respiratory protection: Use a self-contained respiratory device in an emergency situation.

Section 9: Physical and Chemical Properties

Appearance: Yellow liquid
UFL/LEL: Not determined
LFL/LEL: Not determined

Odor:	Odorless
Vapor pressure:	Not determined
Odor threshold:	Not determined
Vapor density:	Not determined
pH:	Not determined
Relative density:	1.005
Melting Point/Freezing point:	Not determined
Solubility in water:	Partially soluble
Boiling point/boiling range:	Not determined
Flashpoint:	Not determined
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not determined
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined

Inhalation: Strong corrosive effect.
 On the Skin: Strong corrosive effect.
 On the Eye: Strong corrosive effect.
 Sensitization: No data.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic

Section 12: Ecological Information

Avoid release to the environment.

Toxicity:

Aquatic toxicity: No information.

Persistence and degradability: No information.

Behavior in environmental system:

Bioaccumulative potential: No information.

Mobility in soil: No information.

Additional ecological information: No information.

Other adverse effects: No information.

Section 13: Disposal Considerations

Place in a chemical waste container for proper disposal in an approved waste disposal facility. Dispose of the content and container in accordance with local, regional, national, international regulations.

Section 14: Transport Information

D.O.T. shipping name: Hydrochloric acid

D.O.T. hazard class: 8

UN number: UN1789

Packing group: III

Section 15: Regulatory Information

Not meant to be all inclusive, selected regulation represented

OSHA status: These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA status: All components are listed.

Section 16: Other Information

Disclaimer: The information above is believed to be accurate and represents the best information currently available to us. ES Laboratory, LLC makes no warranty, express or implied, as to its accuracy, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. We shall not be liable for any damages to person or property resulting from its use.

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Section 10: Stability and Reactivity

Reactivity: No information.

Chemical stability: Stable under recommended conditions.

Stabilizer(s): Water

Safety issues that may arise should the product change in appearance: This product contains a small amount of dissolved picric acid. Do not allow it to dry completely. Dried picric acid crystal is not stable and may detonate. Do not touch the bottle if any crystalline residue is present around the cap. Call an explosive expert immediately.

Thermal decomposition/ conditions to Avoid: Excessive heat, incompatible materials, ignition sources, dryness.

Possibility of hazardous reactions: see incompatibilities.

Incompatibilities: Strong oxidizing agents. Strong bases. Strong reducing agents. Metals.

Hazardous decomposition products: Carbon oxides and nitrogen oxides, when heated to decomposition.

Section 11: Toxicological Information

For Picric Acid:

Acute toxicity:

Oral rat LD50: 200mg/kg.

Other exposure effect:

Inhalation: May cause irritation.

On the Skin: May stain skin and cause irritation.

On the Eye: May cause irritation.

Sensitization: May cause allergic skin reaction.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. May be absorbed through the skin. No classification data on carcinogenic properties of this material is available from NTP, IARC, or OSHA.

For Sodium dodecylbenzene sulfonate:

Acute toxicity:

Oral rat LD50: 500-2000 mg/kg.

Other exposure effect:

Inhalation: No data

On the Skin: Irritating to skin (rabbit).

On the Eye: Risk of serious damage to eyes (rabbit).

Sensitization: No data.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. May be absorbed through the skin. No classification data on carcinogenic properties of this material is available from NTP, IARC, or OSHA.

For Hydrochloric Acid:

Acute toxicity:

Oral rat LD50: 900 mg/kg.

Other exposure effect: