

Safety Data Sheet (SDS)

Section 1: Identification

Product identifier: S1095 Carbon Steel Etchant
Other name(s): GE Class E
Item number(s): 1026
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 |
| Skin irritation | 2 |
| Eye irritation | 2A |

Signal word: Warning

Pictogram:



Hazard statement(s):

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statement(s):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P234 Keep only in original container.
P264 Wash skin thoroughly after handling.

Response statement(s):

P302 + P352 ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.

Storage statement(s):

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

Disposal statement(s): None

Hazard(s) not otherwise classified: No information.

Label elements: See tables above

HMIS Ratings:

Health: 3
Flammability: 0
Physical: 2

NFPA Ratings:

Health: 3
Flammability: 0
Reactivity: 0
Special hazard: None

Section 3: Composition/Information on Ingredients

| Component | CAS No. | Concentration (wt%) |
|-----------|---------|---------------------|
|-----------|---------|---------------------|

| Nitric acid | 7697-37-2 | 5-8% |
|-------------|-----------|------|
|-------------|-----------|------|

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. Get medical aid immediately.

Ingestion: Do not induce vomiting. Rinse mouth. Get medical aid immediately.

Most important symptoms and effects, both acute and delayed: No information.

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

Section 5: Fire-Fighting Measures

Extinguishing media: Water, foam, dry chemical, or carbon dioxide.

Special hazards arising from the substance or mixture: In the case of fire, the following can be released: acidic liquid or fume.

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

Section 6: Accidental Release Measures

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

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

Methods and materials for containment and cleaning up: Use a neutralizing agent. 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.

Section 7: Handling and Storage

Precautions for safe handling: Wear protective equipment. Ensure good ventilation in the workplace. Open and handle container with care.

Condition for safe storage: Keep container tightly sealed. Store in an approved corrosive liquid storage container/area.

Incompatibilities: Store away from strong bases.

Specific storage requirement(s): No information.

Section 8: Exposure Controls/Personal Protection

Exposure Limits

| Component | CAS No. | ACGIH TLV | OSHA PEL |
|-------------|-----------|-------------------------|-----------|
| Nitric acid | 7697-37-2 | 2 ppm TWA 4 ppm STEL | 2 ppm TWA |

Engineering controls: Use general and/or local exhaust ventilation to control the vapor concentration.

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:

Clear liquid

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

D.O.T. shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)
D.O.T. hazard class: 8
UN number: UN3264
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 storage conditions.
Stabilizer(s): Not required.
Safety issues that may arise should the product change in appearance: No information.
Thermal decomposition/ conditions to Avoid: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: see incompatibilities.
Incompatibilities: Strong bases.
Hazardous decomposition products: acidic fume, when heated to decomposition.

Section 11: Toxicological Information

For Nitric Acid:

Acute toxicity:

Inhalation rat LC50/4H: 0.13 mg/1/4H
Oral (human) LDLo: 430 mg/kg.

Other exposure effect:

On the Skin: Strong corrosive effect.
On the Eye: Strong corrosive effect.
Sensitization: No sensitizing effects are known.
Additional toxicological information No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP, IARC, or OSHA.

Section 12: Ecological Information

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: Avoid transfer into the environment.

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