Section 1: CHEMICAL PRODUCT AND COMPANY INDENTIFICATION

Product Name:	ASTM #80 Vilella's Etchant
Part Number:	ETCH-ASTM80 (all sizes)
Relevant Use:	Laboratory Chemicals
Manufacturer:	Sturbridge Metallurgical Services Inc.
City, State, Zip	Sturbridge MA 01566
Phone Number	508-347-5288
Emergency Phone:	**CHEMTREC 1-800-424-9300**

Section 2: Hazard(s) Identification

Hazardous classification of the substance or mixture:

Hazard Class	Category code
Flammable Liquid	2
Skin irritation	2
Eye irritation	2A
Skin sensitization	1
Acute toxicity (oral)	3
Specific Target Organ Toxicity –Single Exposure	2

Pictogram:

Signal word: Danger

Hazard Statements:
H225- Highly flammable liquid and vapor
H315+H319- Cause skin irritation and serious eye irritation
H317- May cause allergic skin reaction.
H301- Toxic if swallowed.
H371- May cause damage to organs.

Precautionary Statements:
P210- Keep away from heat / sparks / open flames / hot surfaces- No smoking
P260- Do no breathe dust / fume / gas / mist / vapors / spray
P280- Wear protective gloves / protective clothing / eye protection / face protection.

Response Statements:
P303 + P361 + P353- IF ON SKIN (or hair): Take off 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.
P301 + P330 + P331 +P311- F SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a CENTER or doctor/ physician

Storage Statement:
P403+ P233 + P235 -Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405-Store locked up.

Disposal statement:
P501-Dispose of contents in accordance with local, state, federal and international regulations.

Hazard(s) not otherwise classified: None

HMIS Ratings:
Health: 2
Flammability: 3
Reactivity: 1

Section 3: Composition/Information on Ingredients

Chemical Name	CAS No.	% Concentration
Ethanol (ethyl alcohol	64-17-5	Blance
Hydrochloric Acid	7646-01-0	5%
Picric Acid	88-89-1	Approx. 1%

Section 4: First-Aid Measures

First-aid measures general
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

First-aid measures after inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Get medical aid immediately.

First-aid measures after 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.

First-aid measures after 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.

First-aid measures after ingestion
Rinse mouth. Do not induce vomiting. Get medical aid immediately.

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

Section 5: Fire-Fighting Measures

Suitable extinguishing media
Dry chemical, “alcohol foam”, carbon dioxide, or water spray.

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

Advice for firefighters
Wear full protective clothing and 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 government permits.

Methods and materials for containment and cleaning up
Absorb with liquid binding material (sand, diatomite, acid binder, universal binders, saw dust). Dispose 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
Wipe clean the screw top of the container before sealing. Keep container tightly sealed. Store is cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Protect against electrostatic charges. Fume can combine with air to form and explosive mixture.

Conditions for safe storage
Keep container tightly sealed. Store in in an approved flammable liquid storage container/area.

Incompatibilities
Store away from oxidizing agents, strong bases. Do not store on concrete floors (can form explosive calcium picrate). May react with various substances, see Section 10.

Specific storage requirement(s)
Inspect the content periodically. Do not let it dry completely. Keep wetted with ethanol.

Section 8: Exposure Controls/Personal Protection Exposure Limits

Component	CAS No.	ACGIH TLV	OSHA PEL
Ethanol (ethyl alcohol)	64-17-5	1000 ppm STEL	1000 ppm TWA
Hydrochloric Acid	7647-01-0	C 5 ppm	C 2 ppm
Picric Acid	88-89-1	0.1 mg/m3 TWA	0.1 mg/m3 TWA skin

Personal protective equipment
Eye/face protection-Wear safety glasses or goggles.
Skin protection- Wear protective clothing and chemical resistant gloves
Respiratory protection -Use self-contained respiratory device in emergency situation.
Engineering controls-Use general and/or local exhaust ventilation to control the vapor concentration.

Section 9: Physical and Chemical Properties

Physical state: Liquid
Appearance: Form: liquid, yellow
Color: yellow
Odor: alcohol like
Vapor pressure: Not determined
Odor Threshold: Not determined
Vapor density: Not determined

pH: Not determined
Relative density: Not determined
Melting Point: Not determined
Freezing Point: Not determined
Water Solubility: Miscible
Boiling Point: Not determined
Flash Point: Not determined
Relative 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

Section 10: Stability and Reactivity

Reactivity: No information.
Chemical stability: Stable under recommended conditions.
Stabilizer(s): Ethanol.
Safety issues that may arise should the product change in appearance: Picric Acid may detonate if allowed to dry completely. 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 bases and oxidizers. Picric acid will react with metals including copper, lead, zinc, and aluminum; ammonia, concrete, plaster, salts, gelatin, silver salts, alkali metals, and many other materials to form dangerously sensitive salts.
Hazardous decomposition products: oxides of carbon, when heated to decomposition.

Section 11: Toxicological Information:

For Hydrochloric Acid:
Acute toxicity: Oral rat LD50: 900 mg/kg.
Other exposure effect:
Inhalation: Strong corrosive effect
On the Skin: Strong corrosive effect
On the Eye: Strong corrosive effect
Sensitization: No sensitizing effects known.
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 properties of this material is available from NTP or OSHA. IARC-3 Not classifiable as to human carcinogenicity.

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 skin. No classification data on carcinogenic properties of this material is available from NTP, IARC or OSHA.

Section 12: Ecological Information

Toxicity

Ecology – water: No data available
Persistence and degradability: No data available
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: Transportation Information

D.O.T. shipping name: Flammable liquid, Corrosive n.o.s., (Ethanol, hydrochloric acid)
D.O.T. hazard class: 3, 8
UN number: UN2924
Packing group: II

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. SMS, Inc. makes no warranty, express or implied, as to its accuracy, and we assumes 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.