



# SAFETY DATA SHEET

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Version 2

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code(s):** DA405000-M  
**Product Name** HOUGHTO-ETCH AX-2050

**Recommended use** Metalworking fluid  
**Uses advised against** Any other purpose.

### **Manufacturer, Importer, Supplier**

Houghton International Inc.  
Madison & Van Buren Aves.  
Valley Forge, PA 19482  
Telephone: 610-666-4000 FAX: 610-666-1376  
Website: www.houghtonintl.com  
Customer Service: 888-459-9844

Houghton Canada  
915 Meyerside Drive  
Mississauga  
ON L5T 1R8

### Emergency telephone number

3E Company 1-866-519-4752 (USA, Canada, Mexico)  
Company Access Code: 333938

## SECTION 2: HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral	Category 3
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### GHS Label elements, including precautionary statements

**Signal Word**  
DANGER

### **Hazard Statements**

Toxic if swallowed  
Causes severe skin burns and eye damage



### **Precautionary Statements**

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician

**Eyes**

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

Immediately call a POISON CENTER or doctor/physician

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other information**

Not applicable

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

This product is a mixture. Health hazard information is based on its ingredients.

Chemical Name	CAS-No	Weight %
Ammonium hydrogendifluoride	1341-49-7	60% - 100%
Diammonium hydrogenorthophosphate	7783-28-0	2.5% - 10%

**SECTION 4: FIRST AID MEASURES****4.1. Description of first-aid measures****General advice**

Immediate medical attention is required. Do not get in eyes, on skin, or on clothing.

**Inhalation**

Move to fresh air.

**Skin contact**

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Immediate medical attention is required.

**Eye contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Seek immediate medical attention/advice.

**Ingestion**

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.

**Protection of First-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**4.2. Most important symptoms and effects, both acute and delayed**

**Main Symptoms** Gastrointestinal discomfort, Causes burns, blistering

**4.3. Indication of immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically.

## SECTION 5: FIRE FIGHTING MEASURES

**5.1. Extinguishing media**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment:, Use CO2, dry chemical, or foam, Water spray or fog

**Extinguishing media which shall not be used for safety reasons**

None

**5.2. Special hazards arising from the substance or mixture**

**Special Hazard**

Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Decomposition Products**

None under normal use

**5.3. Advice for firefighters**

**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas.

**Advice for non-emergency personnel**

Material can create slippery conditions.

**Advice for emergency responders** For personal protection see section 8.

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

**6.3. Methods and materials for containment and cleaning up**

Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. After cleaning, flush away traces with water.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 7 and 8

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Technical measures/Storage conditions**

Keep container tightly closed in a dry and well-ventilated place.

**Recommended Shelf Life**

No information available.

**Incompatible Materials**

Strong oxidizing agents, Strong acids, Strong bases

**7.3. Specific end uses**

**Specific use(s)** Metalworking fluid

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA WEEL
Ammonium hydrogendifluoride 1341-49-7	TWA: 2.5 mg/m <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F (vacated) TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> F	

**Other Exposure Guidelines**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Exposure controls****Engineering Measures**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eye/Face Protection**

If splashes are likely to occur, wear: Face-shield.

**Skin and body protection**

Wear protective gloves/clothing.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

<b>Physical state @20°C</b>	Crystalline solid	<b>Appearance</b>	white
<b>Odor</b>	Slight acidic	<b>Odor Threshold</b>	Not Applicable
<u>Property</u>	<u>Values</u>		<u>Note</u>
<b>pH</b>	4.5		@ 1%
<b>Melting Point / Freezing Point</b>	>= 115 °C / >= 239 °F		
<b>Boiling point/boiling range</b>	> 225 °C / > 437 °F		
<b>Flash point</b>	No information available		
<b>Evaporation rate</b>	No information available		
<b>Flammability (solid, gas)</b>	No information available		
<b>Flammability Limits in Air</b>			
upper flammability limit	No information available		
Lower flammability limit	No information available		
<b>Vapor pressure</b>	No information available		
<b>Vapor density</b>	No information available		
<b>Relative density</b>	No information available		
<b>Solubility(ies)</b>	Soluble in water		
<b>Partition coefficient: n-octanol/water</b>	Not Applicable		
<b>Autoignition temperature</b>	No information available		
<b>Decomposition temperature</b>	No information available		
<b>Viscosity, kinematic</b>	No information available		
<b>Explosive properties</b>	Not Applicable		
<b>Oxidizing Properties</b>	Not Applicable		

**9.2 Other information**

<b>Viscosity, kinematic (100°C)</b>	No information available
<b>Pour point</b>	No information available
<b>VOC Content (ASTM E-1868-10)</b>	No information available
<b>VOC Content</b>	No information available

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

None under normal use conditions

**10.2. Chemical stability**

Stable under normal conditions

**10.3. Possibility of hazardous reactions**

None under normal use conditions

**10.4. Conditions to avoid**

Do not freeze

**10.5. Incompatible Materials**

Strong oxidizing agents, Strong acids, Strong bases

**10.6. Hazardous decomposition products**

None under normal use conditions

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Product Information</b>	Toxic if swallowed
<b>Inhalation</b>	There is no data available for this product.
<b>Eye contact</b>	May result in permanent damage including blindness.
<b>Skin contact</b>	Corrosive.
<b>Ingestion</b>	Toxic if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts.

### **Component Information**

Chemical Name	LD50 Oral (Rat)	LD50 Dermal (Rat/Rabbit)	LC50 Inhalation
Ammonium hydrogendifluoride 1341-49-7	130 mg/kg ( Rat )		
Diammonium hydrogenorthophosphate 7783-28-0	6500 mg/kg ( Rat )	> 7950 mg/kg ( Rabbit )	

### Information on toxicological effects

<b>Symptoms</b>	Other side effects may include nausea, headache, diarrhea, cramps, vomiting, or flu-like symptoms. Causes burns. May result in permanent damage including blindness. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Product dust may be irritating to eyes, skin and respiratory system.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Sensitization</b>	None known.
<b>Germ Cell Mutagenicity</b>	None known.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ammonium hydrogendifluoride 1341-49-7		Group 3		

*IARC: (International Agency for Research on Cancer)  
Group 3 - Not Classifiable as to Carcinogenicity in Humans*

<b>Reproductive toxicity</b>	None known.
<b>Specific target organ systemic toxicity (single exposure)</b>	None known.
<b>Specific target organ systemic toxicity (repeated exposure)</b>	None known.
<b>Aspiration hazard</b>	None known.

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Diammonium hydrogenorthophosphate	>97.1: 72 h Pseudokirchneriella subcapitata mg/L EC50	550: 96 h Sarotherodon mossambicus mg/L LC50		1790: 72 h Daphnia carinata mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

Will likely be mobile in the environment due to its water solubility.

**Other adverse effects**

No information available

**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods**

Dispose of in accordance with federal, state, and local regulations.

**Contaminated packaging**

Observe all label precautions until container is cleaned, reconditioned or destroyed.

**SECTION 14: TRANSPORT INFORMATION****DOT**

UN/ID No	UN1727
Proper shipping name	Ammonium hydrogendifluoride, solid
Hazard class	8
Packing group	II
Special Provisions	IB8, IP2, IP4, N34, T3, TP33
Description	UN1727, AMMONIUM HYDROGENDIFLUORIDE, SOLID, 8, II
Emergency Response Guide Number	154

**TDG**

UN/ID No	UN1727
Proper shipping name	Ammonium hydrogendifluoride, solid
Hazard class	8
Packing Group	II
Description	UN1727, AMMONIUM HYDROGENDIFLUORIDE, SOLID, 8, II

**ICAO/IATA**

UN No.	UN1727
Proper shipping name	Ammonium hydrogendifluoride, solid
Hazard class	8
Packing group	II
Description	UN1727, AMMONIUM HYDROGENDIFLUORIDE, SOLID, 8, II

**IMDG/IMO**

UN No.	UN1727
Proper shipping name	Ammonium hydrogendifluoride, solid
Hazard class	8
Packing Group	II
EmS No.	F-A, S-B
Description	UN1727, AMMONIUM HYDROGENDIFLUORIDE, SOLID, 8, II

**SECTION 15: REGULATORY INFORMATION****International Inventories**

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>AICS</b>	Complies
<b>PICCS</b>	Complies
<b>KECL</b>	Complies
<b>IECSC</b>	Complies
<b>ENCS</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**AICS** - Australian Inventory of Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Ammonium hydrogendifluoride	1341-49-7	90.91	1.0
Diammonium hydrogenorthophosphate	7783-28-0	8.8173	1.0

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium hydrogendifluoride	100 lb			X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Ammonium hydrogendifluoride	100 lb	

**U.S. State Regulations****SCAQMD Rule 1144**

This product has not been tested for VOC content by the ASTM E-1868-10 method and is not approved for sale or distribution in the SCAQM District of California if the product is used as a metal forming, metal removal, metal treating, metal protection fluid or as a direct-contact lubricant.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**International Regulations**



**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

D1B Toxic materials

E Corrosive material

**Other information**

Not applicable

**SECTION 16: OTHER INFORMATION****NFPA**

Health Hazard 3

Flammability 1

Instability 0

Physical and chemical  
hazards -**Key or legend to abbreviations and acronyms used in the safety data sheet**

STOT SE - Specific target organ systemic toxicity (Single exposure)

STOT RE - Specific target organ systemic toxicity (repeated exposure)

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

VOC - Volatile organic compounds

NIOSH IDLH: Immediately Dangerous to Life or Health

**Issuing Date:** 07-23-2015**Revision Date:** 07-23-2015**Revision Note**

No information available

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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