

MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 001
Date Prepared: 01/05/96
Date Printed: 08/02/97
MSDS No: 0294618-002.001

PAD ETCH W/FC93

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: PAD ETCH W/FC93
General or Generic ID: BLEND

Company

Ashland Chemical Co.
P.O. Box 2219
Columbus, OH 43216
614-790-3333

Emergency Telephone Number:

1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:
1-800-325-3731

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
WATER		51.0- 55.0
ACETIC ACID	64-19-7	31.0- 35.0
AMMONIUM FLUORIDE	12125-01-8	12.0- 16.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin

Both the liquid and vapor can cause severe burns which may not be immediately painful or visible.

Swallowing

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract.

Symptoms of Exposure

No data

Target Organ Effects

Repeated, prolonged overexposure to inorganic fluoride compounds may result in increased bone density, fluorosis, digestive disturbances, loss of weight, anemia, and diseases of the teeth.

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Developmental Information
No data**Cancer Information**
No data**Other Health Effects**
No data**Primary Route(s) of Entry**
Inhalation, Skin absorption, Skin contact.

4. FIRST AID MEASURES**Eyes**

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Immediately flush contaminated skin with large quantities of cool water for at least 15 minutes. Remove contaminated clothing. As soon as possible apply 2.5% calcium gluconate gel to all affected skin areas. The gel should be massaged into the affected skin by personnel wearing protective gloves to prevent skin contamination during first aid. Alternatively, affected areas may be soaked in either iced 0.2% water solution of Hyamine 1622 or iced 0.13% water solution of Zephiran chloride. If Hyamine 1622 or Zephiran chloride solutions are not available, use an iced saturated water solution of magnesium sulfate (Epsom salts), or if that is not available, iced 70% alcohol or ice water. Get medical attention as soon as possible. ::NOTE::Calcium gluconate gel can be prepared by mixing a 10 milliliter ampule of calcium gluconate with a 2-ounce tube of K-Y jelly (Johnson & Johnson). After a jar of this mixture has been opened and used it should be discarded to prevent bacterial or chemical contamination. If Hyamine or Zephiran solutions are used, they should be prepared in advance and kept in a refrigerator in the first aid area.

Swallowing

Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended. Several glasses of milk may also be given. The calcium in milk and the magnesium in milk of magnesia will act as an antidote in cases of hydrofluoric acid ingestion.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians

No data

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5. FIRE FIGHTING MEASURES

Flash Point

.0 F (-17.7 C)

Explosive Limit

(for component) Lower 4.0 %

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: acid vapors, ammonia, carbon dioxide and carbon monoxide, hydrogen fluoride.

Fire and Explosion Hazards

No data

Extinguishing Media

Water fog.

Fire Fighting Instructions

Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breaching apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Not determined

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Cover the contaminated surface with sodium bicarbonate or a soda ash/flaked lime mixture (50-50). Mix and add water if necessary to form a slurry. Scoop up slurry and wash site with soda ash solution. Proper mixing procedures are essential. Trained personnel should conduct this procedure. Untrained personnel should be removed from the spill area.

Large Spill

Persons not wearing protective equipment should be excluded from area of spill until clean-up is completed. Stop spill at source. Dike to prevent spreading. Pump to salvage tank.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Addition to water releases heat which can result in violent boiling and spattering. Always add slowly and in small amounts. Never use hot water. Never add water to acids. Always add acids to water.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

Skin Protection

Wear resistant gloves such as: neoprene, polyvinyl chloride, To prevent skin contact, wear impervious clothing and boots..

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

WATER

No exposure limits established

ACETIC ACID (64-19-7)

OSHA PEL 10.000 ppm - TWA

ACGIH TLV 10.000 ppm - TWA

ACGIH TLV 15.000 ppm - STEL

AMMONIUM FLUORIDE (12125-01-8)

No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for component) 180.0 F (82.2 C) @ 760 mmHg

Vapor Pressure

(for component) 34.000 mmHg @ 77.00 F

Specific Vapor Density

1.000 @ AIR=1

Specific Gravity

1.058 @ 77.00 F

Liquid Density

8.799 lbs/gal @ 77.00 F

1.058 kg/l @ 25.00 C

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Percent Volatiles
60.0 %

Evaporation Rate
SLOWER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form
No data

Color
No data

Odor
No data

pH
No data

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: acid vapors, ammonia, carbon dioxide and carbon monoxide, hydrogen fluoride.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: metals, organic materials, reducing agents, strong alkalis, Acid reacts with most metals to release hydrogen gas which can form explosive mixtures with air..

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information

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

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., 8, UN3265, II

Container/Mode:

55 GAL DRUM/TRUCK PACKAGE

NOS Component:

ACETIC ACID

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs) Component

735	AMMONIUM FLUORIDE
15152	ACETIC ACID

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs)
ACETIC ACID	5000
AMMONIUM FLUORIDE	100

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed() Fire() Reactive() Sudden Release of
Pressure()

SARA 313 Components - 40 CFR 372.65

None

International Regulations

Inventory Status

Not determined

State and Local Regulations

California Proposition 65

None

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NEW JERSEY RTE Label Information
ACETIC ACID
AMMONIUM FLUORIDE64-19-7
12125-01-8Pennsylvania RTK Label Information
ACETIC ACID
AMMONIUM FLUORIDE ((NH₄)F)64-19-7
12125-01-8

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be accurate. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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