

MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER INFORMATION

MANUF / DIST: DETAILS MANUFACTURING & DISTRIBUTING
814 SOUTH DUFF AVE
AMES, IOWA 50010

PREPARER/CONTACT: LUKE STAGG
PHONE 515-233-6555

MEDICAL/CHEMICAL EMERGENCY 24 HOURS INFOTRAC 800-535-5053

TRADE NAME / SYNONYMS. . . . : BRAKE AWAY

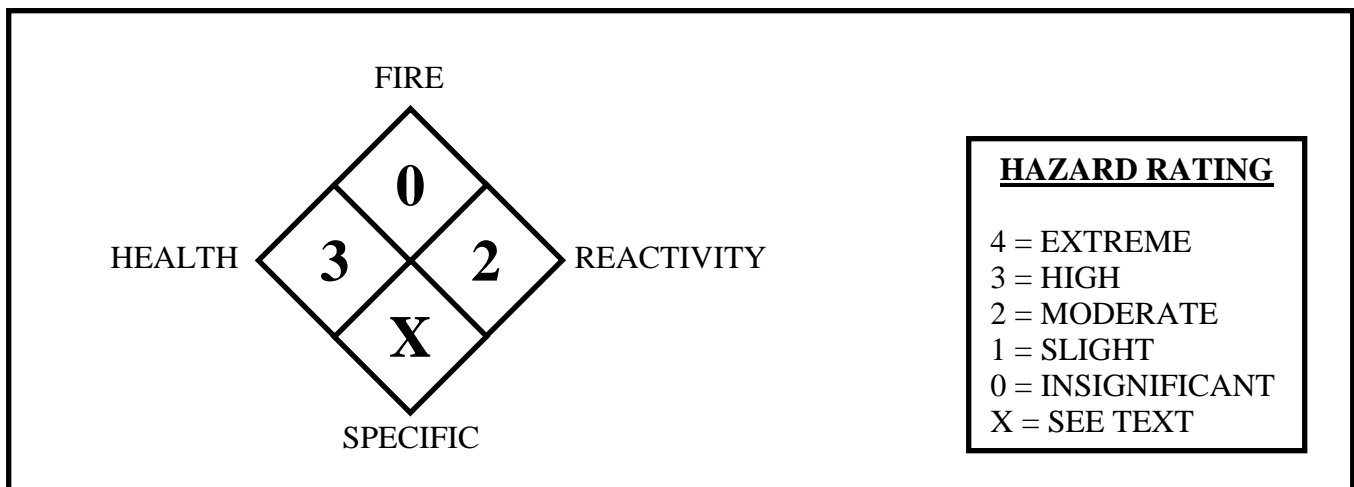
CHEMICAL NAME / SYNONYMS. : NOT APPLICABLE

CHEMICAL FAMILY. : NOT APPLICABLE

FORMULA. : Proprietary

PRODUCT CODE. : BA1,15,55

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM:



SECTION 2 - HAZARDOUS INGREDIENTS

NAMES OF HAZARDOUS INGREDIENTS: See CFR29§1910.1200 (i)-(13)

CHEMICAL / COMMON NAME	CAS#	PERCENTAGE	PEL-OSHA	TLV-ACGIH
Hydrofluoric Acid	7664-39-3	>1	2.5mg/m3	2.5mg/m3
Sulfuric Acid	7664-93-9	>1	1mg/m3	1mg/m3
2 Butoxy Ethanol (Skin)	111-76-2	>1	50PPM	25PPM

THIS PRODUCT HAS NO CARCINOGENS

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SECTION 3 - HEALTH HAZARD DATA

HEALTH EFFECTS (Acute and Chronic):

Acute:

- a) Eyes -Vapors as well as liquid can cause corneal burns or conjunctivitis.
- b) Skin - Vapors as well as liquid can cause severe burns which may not immediately be noticed. Hydrofluoric Acid will penetrate skin and attack protein, subsurface tissue and bone.
- c) Inhalation - Even small amounts, and prolonged breathing of fumes can cause irritation. Heavy exposure can cause throat burns, lung inflammation and pulmonary edema. Calcium level in body will be depleted if not promptly treated.
- d) Ingestion - Will cause severe mouth, throat and stomach burns kidneys can be affected, can be fatal. Possibility of hypocalcemia could be fatal, unless medical attention is prompt.

*******SEE ADDITIONAL COMMENTS SECTION *******

Chronic

- a) Overexposure to Mineral Acids has been found to cause anemia, liver, kidney, and lung damage. Hypocalcemia and blood damage and tissue breakdown in laboratory animals.

PRIMARY ROUTES OF ENTRY:

- a) Skin b) Inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to product.

EMERGENCY FIRST AID PROCEDURES:

- a) Skin - Immediately flush skin with lots of running water for at least 30minutes. Remove contaminated clothing and shoes. Wash before reuse.
- b) Eyes - Flush immediately with large quantities of running water for at least 15 minutes. Consult physician.
- c) Inhalation - If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet and get medical attention.
- d) Ingestion - Call physician immediately. If conscious give lots of water or milk. Do not give anything by mouth to an unconscious or convulsing person.

SECTION 4 - CHEMICAL DATA

BOILING POINT (F) : >212

VAPOR PRESSURE (mmHg) : < 2

VAPOR DENSITY (AIR=1) : 2

APPEARANCE AND ODOR INFORMATION:

SPECIFIC GRAVITY (WATER=1) : > 1

PERCENT VOLATILE BY VOLUME (%) . . . : > 80

EVAPORATION RATE (WATER=1) : 1

Color will vary, pungent acid odor.

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SECTION 5 - PHYSICAL HAZARD DATA

FLASH POINT (Method Used): None FLAMMABLE LIMITS: Lel= N/A UEL= N/A
EXTINGUISHING MEDIA: SEE SECTION 8 OTHER ADDITIONAL COMMENTS
SPECIAL FIRE FIGHTING PROCEDURES: Clear area of all personnel. Do not enter confined area without full bunker gear. See additional comments section.
UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A
INCOMPATIBILITY (Material To Avoid): Alkalies, silicones, metals, organics.
HAZARDOUS DECOMPOSITION PRODUCTS: None
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.
CONDITIONS TO AVOID FOR POLYMERIZATION: N/A
THIS PRODUCT IS STABLE
CONDITIONS TO AVOID FOR STABILITY: N/A

SECTION 6 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Absorb the large spill with suitable absorbant. Lime slurry, soda ash, or other alkali can neutralize the acid. Wash the residue down the drain or pit with plenty of water. Small spills can be flushed down the drain with plenty of water.

WASTE DISPOSAL METHODS:

Dispose of according to local, state and federal regulations.

SECTION 7 - EXPOSURE CONTROL INFORMATION

VENTILATION:

LOCAL EXHAUST: Below TLV(s) MECHANICAL (General) : N/A

SPECIAL : N/A OTHER : N/A

RESPIRATORY PROTECTION: (IF ABOVE TLV's)

An appropriate NIOSH approved respirator for hydrogen fluoride gas.

PROTECTIVE GLOVES:

Acid resistant gloves should be worn when using. In case of spills, full protective clothing should be worn.

OTHER PROTECTIVE EQUIPMENT:

Skin protection, goggles, full length acid resistant clothing should always be worn when working with this product. Eye wash and quick drench facilities should be readily available in workplace.

OTHER ENGINEERING CONTROLS: None Known

WORK PRACTICES:

Eye wash fountain and safety shower should be easily accessible. Discard properly Do not use steel wool for application. Use stainless steel brushes, always wear protective gloves, face and eye protection.

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HYGIENIC PRACTICES:

Avoid contact with eyes, skin and clothing. Avoid inhalation of product vapors. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash thoroughly before reusing.

SECTION 8 - SPECIAL PRECAUTION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

- a) Do not store under freezing conditions or above 120 degrees F.
- b) Protect from physical damage and keep tightly closed.
- c) Do not store near alkalis or alkaline materials and oxidizers.
- d) Do not use glass containers for storage.
- e) Containers mark: Hydrofluoric acid solution, not more than 60% strength, 8, UN1790 P G II, Corrosive, Poison.

MAINTENANCE PRECAUTIONS:

When working with FLAMMABLE material electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS:

Containers, even those that have been emptied will retain product residue and v
Always obey hazard warnings. Avoid dropping full containers, they may burst, and cause spills.

EYE, FACE, AND BODY PROTECTION SHOULD ALWAYS BE WORN WHEN HANDLING OR USING THIS PRODUCT. SEE EXPOSURE CONTROL SECTION 7.

SHIPPING INFO, UN/NA #'s, Secondary container label INFO NECESSARY OR SUGGESTED:

OTHER ADDITIONAL COMMENTS:

SPECIAL FIRE FIGHTING OR SPILL PROCEDURES - ALWAYS WEAR FULL BUNKER GEAR, AND BREATHING APPARATUS. COOL CONTAINERS WITH WATERFOG SPRAY. HEAVY STREAMS COULD SPREAD, AND SPLASH ACID ON OTHERS.

HEALTH EFFECTS -

- a. Fluorosis in bone and joints.
- b. Skin tissues can be deteriorated with exposure. Dermatitis, irritation, burning, pain can be prevented with proper handling, and protective equipment and clothing. Those personnel using this product should be familiar with the use, and cautioned to the severity of damage that could be caused by mis-handling

**HYDROFLUORIC ACID SOLUTION, not more than 60% strength, 8,
UN-1790, PG II, CORROSIVE, POISON**

KEEP OUT OF THE REACH OF CHILDREN!

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