SAFETY DATA SHEET
E-Z BRITE

SECTION 1: IDENTIFICATION

Product Name:	E-Z Brite
Product Code:	T90
Product Use:	Non-polished metal cleaner
Manufacturer's Name:	E-ZOIL Products, Inc.
Address:	234 Fillmore Avenue
Address:	Tonawanda, NY 14150 USA
Business Phone:	855-693-9645
Emergency Phone:	800-633-8253 PERS
Date of Preparation:	October 1, 2015
Date of Last Revision:	October 1, 2015
Regulatory Standard:	CFR29 1910.1200 HazCom 2012

SECTION 2: HAZARDS IDENTIFICATION

GHS-US classification
Flammable Liquid 2
Acute toxicity 2 (Oral)
Acute toxicity 1, sub-category A (Dermal)
Acute toxicity (Gases) 3 (Inhalation)
Acute toxicity (Dusts/Mists) 2 (Inhalation)
Eye Irritation 1
Carcinogenicity – 1A
Reproductive toxicity – No data available
Specific target organ toxicity – No data available
Specific target organ toxicity – No data available
Specific target organ toxicity – No data available

Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger

Hazard statements (GHS-US): Harmful if swallowed. Fatal if inhaled. Causes severe skin burns and eye damage. May cause cancer. Fatal if inhaled. Fatal if swallowed.

Precautionary statements – Prevention (GHS-US): Obtain special instructions before use. Do not handle until all safety precautions have been read and understood Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray Wear respiratory protection.

Precautionary statements – Response (GHS-US): Specific treatment is urgent (see Section 4 on this SDS). Immediately call a POISON CENTER or doctor/physician See specific measures in Section 4 First Aid.

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

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.

If swallowed: Call a Poison Center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.

Precautionary statements – Storage (GHS-US): Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Precautionary statements – Disposal (GHS-US): Dispose of contents/container to an approved waste disposal plant.

Other information – No data available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS Number	%
Hydrogen fluoride	7664-39-3	10-20
Sulfuric acid	7664-93-9	10-20
Quaternary Ammonium Compounds	68187-69-9	<5
2-Butoxyethanol	111-76-2	<5

The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

General advice: For any route of contact: Detailed First Aid procedure should be planned before beginning work with HF. In all cases, immediately call a POISON CENTER or doctor/ physician.

First-aid measures after inhalation: Call a physician or poison control center immediately. In case of accident by inhalation: remove casualty to fresh air and keep at rest. Give oxygen or artificial respiration if needed. Lie victim down in the recovery position, cover and keep victim warm. Call a physician immediately. Take victim immediately to hospital.

First-aid measures after skin contact: 1) Remove the victim from the contaminated area and immediately place him under a safety shower or wash him with a water hose, whichever is available. 2) Remove all contaminated clothing. Handle all HF-contaminated material with gloves made of appropriate material, such as PVC or neoprene. 3) Keep washing with large amounts of water for a minimum of 15 minutes. 4) Have someone make arrangements for medical attention while you continue flushing the affected area with water. 5) If the following materials are available, limit the washing to five minutes and immerse the burned area in a solution of 0.2% iced aqueous *Hyamine 1622 or 0.13% iced aqueous **Zephiran Chloride. If immersion is not practical, towels should be soaked with one of the above solutions and used as compresses for the burn area. Ideally compresses should be changed every 2 minutes. Alternately, 2.5% calcium gluconate gel should bemassaged into the affected area. 6) Seek medical attention as soon as possible for all burns regardless of how minor they may appear initially.* Hyamine 1622 is a trade name for Tetracaine Benzethonium Chloride, Merck Index Monograph 1078, a quaternary ammonium compound sold by Rohm & Haas, Philadelphia.** Zephiran Chloride is a trade name for Benzalkonium Chloride, Merck Index Monograph 1059, also a quaternary ammonium compound, sold by Sanofi-Synthelabo Inc., New York, NY.

First-aid measures after eye contact: 1) Irrigate eyes for at least 30 minutes with copious quantities of water, keeping the eyelids apart and away from eyeballs during irrigation. 2) Get competent medical attention immediately, preferably an eye specialist. 3) If a physician is not immediately available, apply one or two drops of ophthalmic anesthetic, (e.g., 0.5%Pontocaine Hydrochloride solution.) 4) Do not use oily drops, ointment or HF skin burn treatments. Place ice pack on eyes until reaching emergency room.

First-aid measures after ingestion: Call a physician or poison control center immediately. Immediate medical attention is required. Take victim immediately to a hospital. Ingestion: If victim is conscious:- Rinse mouth with water.- Give to drink a 1% aqueous calcium gluconate solution.- Do NOT induce vomiting.- Artificial respiration and/or oxygen may be necessary.

Most important symptoms and effects, both acute and delayed: Reference Sources for Section 11.

Self-protection of the first aider: Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Indication of any immediate medical attention and special treatment needed: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other that this product may have occurred.

Symptoms: Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Shortness of breath.

Note to physicians: Take victim immediately to hospital. If skin irritation occurs: Immediately apply calcium gluconate gel 2.5% and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved. HF-Antidote Gel from IPS Healthcare is recommended as treatment for injuries from hydrofluoric acid. Please make sure that hospital staff is aware of the unique characteristics of injuries caused by HF exposures and the fact that the systemic toxic effects of the exposure will require prompt serum monitoring of fluorides, calcium, magnesium and sodium, and calcium replacement by infusion.

SECTION 5: FIRE FIGHTING MEASURES

Suitable extinguishing media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small fire:	Reacts with organic materials and may cause ignition of finely divided materials on contact.
Unsuitable extinguishing media:	CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical: No data available.

Hazardous combustion products:	None.
Explosion data:	None
Sensitivity to mechanical impact:	None
Sensitivity to static discharge:	None

Protective equipment and precautions for firefighters: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Avoid getting water in tanks or drums; water can cause generation of heat and spattering. In contact with air, the acid gives off corrosive fumes which are heavier than air. In the event of a fire / explosion do not breathe vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

General measures: Notify safety personnel, provide adequate ventilation, and remove ignition sources since Hydrogen may be generated by reactions with metals. Wear appropriate personal protective equipment. Isolate hazard area. Evacuate the danger area. Keep unnecessary and unprotected personnel from entering. Avoid contact with eyes/skin. Ensure adequate ventilation, especially in confined areas. Ventilate affected area.

Environmental precautions: Apply magnesium sulfate (dry) to the spill area. Follow up with inert absorbent and add soda ash or magnesium oxide and slaked lime. Collect in appropriate plastic containers and save for disposal. Wash spill site with soda ash solution. NOTE: Porous materials (concrete, wood, plastic, etc.) will absorb HF and become a hazard for an indefinite time. Such spills should be cleaned and neutralized immediately. Do not flush to sewers or waterways! US

Regulations(CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. Dike to collect large liquid spills. Contain and recover liquid when possible. Do not let product enter drains. Neutralize with alkaline material (soda ash, lime,)then absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Prevent further leakage or spillage if safe to do so.

For containment: A vapor suppressing foam may be used to reduce vapors. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up: Prevent product from entering drains. Pick up mechanically. Collect in suitable containers. To absorb spilled substance an approved industrial vacuum cleaner is recommended. Dispose of absorbed material in accordance with the regulations. Avoid creating dust. Rinse away any residue with plenty of water. Pack and label wastes like the pure substance. Do not detach label from the delivery containers prior to disposal.

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Advice on handling. Keep in tightly closed polyethylene containers. Store in a cool, dry place with adequate ventilation separated from other chemicals. Protect from physical damage. Storage facilities should be constructed for containment and neutralization of spills. Handling and storage of HF requires special materials and technology for containers, pipes, valves, etc., which is available from suppliers. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. When diluting, always add the acid to water, never add water to the acid.

Storage conditions: Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store in accordance with the particular national regulations.

Incompatible materials: Hydrofluoric Acid is incompatible with Arsenic Trioxide, Phosphorus Pentoxide, Ammonia, Calcium Oxide, Sodium Hydroxide, Sulfuric Acid, Vinyl Acetate, Ethylenediamine, Acetic Anhydride, alkalis, organic materials, most common metals, rubber, leather, water, strong bases, carbonates, sulfides, cyanides, oxides of silicon, especially glass, concrete, silica, Fluorine. Will also react with steam or water to produce toxic fumes. Water, Potassium Chlorate, Potassium Perchlorate, Potassium Permanganate, Sodium, Lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals (yields Hydrogen gas),strong oxidizing and reducing agents and many other reactive substances.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen fluoride 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m^3 F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 dust (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m^3 (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m^3 15 min TWA: 3 ppm TWA: 2.5 mg/m^3
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3 thoracic fraction	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m^3 (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m^3 (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m^3

Appropriate engineering controls:	Showers, eyewash stations, ventilation systems.
Eye protection:	Chemical resistant goggles must be worn. If splashing is likely, wear tight fitting goggles and face shield.
Skin protection:	Wear protective gloves and protective clothing. Handle with gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves after use in accordance with applicable laws and good industrial practices.
Respiratory protection:	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene considerations:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Appearance:	Translucent
Color:	Blue
Odor:	Stinging acrid
Odor threshold:	No data available
pH:	<1
Melting point/freezing point:	No data available
Boiling point/boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Flammability Limit in Air:	No data available
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.07
Water solubility:	No data available
Solubility in other solvents:	No data available
Partition coefficient:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Extremes of temperature and direct sunlight. Incompatible materials.

Incompatible materials: Hydrofluoric Acid is incompatible with Arsenic Trioxide, Phosphorus Pentoxide, Ammonia, Calcium Oxide, Sodium Hydroxide, Sulfuric Acid, Vinyl Acetate, Ethylenediamine, Acetic Anhydride, alkalis, organic materials, most common metals, rubber, leather, water, strong bases, carbonates, sulfides, cyanides, oxides of silicon, especially glass, concrete, silica, Fluorine. Will also react with steam or water to produce toxic fumes. Water, Potassium Chlorate, Potassium Perchlorate, Potassium Permanganate, Sodium, Lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals (yields Hydrogen gas),strong oxidizing and reducing agents and many other reactive substances.

Hazardous decomposition products: Carbon monoxide. Carbon dioxide (CO2). Oxides of Phosphorus.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity: Toxic if swallowed, in contact with skin or if inhaled.

Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen fluoride 7664-39-3	-	-	= 1276 ppm (Rat) 1 h
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 510 mg/m³ (Rat) 2 h
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 220 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h
Benzenesulfonic acid 68584-22-5	= 530 mg/kg (rat)	= 530 mg/kg (rat)	-

Product information: Poison! Danger! Corrosive. Extremely hazardous liquid and vapor. Causes severe burns which may not be immediately painful or visible. May be fatal if swallowed or inhaled. Liquid and vapor can burn skin, eyes and respiratory tract. Causes bone damage. Reaction with certain metals generates flammable and potentially explosive hydrogen gas. Affects teeth. Water reactive. Cancer hazard. Strong inorganic acid mists containing sulfuric acid can cause cancer. Risk of cancer depends on duration and level of exposure.

Inhalation: Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and labored breathing. May cause lung edema, a medical emergency. Corrosive! May cause sore throat, abdominal pain, diarrhea, vomiting, severe burns of the digestive tract, and kidney dysfunction. Very toxic by inhalation.

Eye contact: Avoid contact with eyes. Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. Can cause blindness.

Skin contact: Avoid contact with skin. Corrosive to the skin! Skin contact causes serious skin burns which may not be immediately apparent or painful. Symptoms may be delayed 8 hours or longer. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. Symptoms of redness, pain, and severe burn can occur. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death.

Ingestion: Harmful if swallowed. Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow ingestion or skin contact. Circulatory shock is often the immediate cause of death.

Symptoms: Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
2-Butoxyethanol	A3	Group 3	-	-

Reproductive toxicity: No data available.

STOT - single exposure: No data available.

STOT - repeated exposure: No data available.

Aspiration hazard: No data available.

Numerical measures of toxicity – Product Information
The following values are calculated based on chapter 3.1 of the GHS document.

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ATEmix (oral): 10.60

ATEmix (dermal): 10.62

ATEmix (gas): 1,356

ATEmix (inhalation-dust/mist): 0.09

ATEmix (inhalation-vapor): 5,100

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen fluoride 7664-39-3	-	660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50
Sulfuric acid 7664-93-9	-	500: 96 h Brachydanio rerio mg/L LC50 static	29: 24 h Daphnia magna mg/L EC50
2-Butoxyethanol111-76-2	-	1490: 96 h Lepomis macrochirus mg/L LC50 static 2950: 96 h Lepomis macrochirus mg/L LC50	1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Name	Partition coefficient
Hydrogen fluoride 7664-39-3	-1.4
2-Butoxyethanol 111-76-2	0.81

Mobility in soil: No data available.

Other adverse effects: No known ecological damage caused by this product.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Contaminated packaging: Do not reuse container.

Name	RCRA	RCRA - Basis for	RCRA - D Series	RCRA - U Series
Hydrogen fluoride 7664-39-3	U134	-	-	U134

Name	California Hazardous Waste Status
Sulfuric acid 7664-93-9	Toxic, Corrosive

SECTION 14: TRANSPORT INFORMATION

UN number: UN3264

Proper shipping name: Corrosive Liquid, Acidic, Inorganic, n.o.s., (Hydrofluoric Acid and Sulfuric Acid)

Transport hazard class(es): 8

Hazard labels:

Packing group: II

Other information: No supplementary information available.

Special transport precautions: Do not handle until all safety precautions have been read and understood.

SECTION 15: REGULATORY INFORMATION

Federal regulations:

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute health hazard: Hydrofluoric Acid - Yes Sulfuric Acid - Yes 2-Butoxyethanol - Yes***
Chronic Health Hazard: 2-Butoxyethanol - Yes Hydrofluoric Acid - Yes Sulfuric Acid - Yes***
Fire hazard: No
Sudden release of pressure hazard: No
Reactive Hazard: Hydrofluoric Acid - Yes Sulfuric Acid - Yes***

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Name	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrogen fluoride 7664-39-3	100 lb	-	-	X
Sulfuric acid 7664-93-9	1000 lb	-	-	X

CERCLA:
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state.

Name	Hazardous substances RQs	CERCLA/SARA RQ	Reportable quantity
Hydrogen fluoride 7664-39-3	100 lb.	100 lb.	RQ 100 lb. final RQ RQ 45.4 kg final RQ
Sulfuric acid 7664-93-9	1000 lb.	1000 lb.	RQ 1000 lb. final RQ RQ 454 kg final RQ

State regulations:

California Proposition 65: This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

U.S. EPA Label Information: EPA Pesticide Registration Number not applicable.

SECTION 16: OTHER INFORMATION

NFPA	Health hazards 4	Flammability 0	Instability 1
HMIS	Health hazards 4	Flammability 0	Physical hazards 1

Other information: None.

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