

AB-100

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 05/16/2016 Date of issue: 05/16/2016

*** DRAFT ***

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: AB-100

1.2. Intended Use of the Product

Use of the Substance/Mixture: No use is specified

1.3. Name, Address, and Telephone of the Responsible Party

Company

Bradley Inc. Chemicals

547 E Old Hickory Blvd.

Madison, TN 37115

Phone: (615) 227-7561

1.4. Emergency Telephone Number

Emergency Number : (615) 227-7561

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US Classification

Acute Tox. 3 (Oral)	H301
Acute Tox. 2 (Dermal)	H310
Acute Tox. 4 (Inhalation:vapor)	H332
Skin Corr. 1B	H314
Eye Dam. 1	H318

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Danger

Hazard Statements (GHS-US)

: H301 - Toxic if swallowed.
H310 - Fatal in contact with skin.
H314 - Causes severe skin burns and eye damage.
H332 - Harmful if inhaled.

Precautionary Statements (GHS-US)

: P260 - Do not breathe vapors, mist, or spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see section 4 on this SDS).
P330 - Rinse mouth.
P361 - Take off immediately all contaminated clothing.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national,

and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. May cause hypocalcemia (hypocalcaemia), which is the presence of low serum calcium levels in the blood. Symptoms include neuromuscular irritability, involuntary contraction of muscles, bronchospasm, tingling in hands/feet/lips, muscle weakness, seizures, slow or uneven heartbeat, lightheadedness, mood changes, and confusion. May also cause fluorosis, which is a bone and dental disease caused by excessive consumption of fluoride. Symptoms include increased frequency of fracture, impaired joint mobility, joint pain, ruptures of stomach lining, nausea.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Proprietary Chemical	(CAS No) Proprietary	4.2	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation:vapor), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Get immediate medical advice/attention.

First-aid Measures After Eye Contact: Get immediate medical advice/attention. Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid Measures After Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Symptoms may be delayed. Fatal in contact with skin. Toxic if swallowed. Harmful if inhaled.

Symptoms/Injuries After Inhalation: Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Symptoms of respiratory complications (lung oedema) may occur several hours after.

Symptoms/Injuries After Skin Contact: This material is fatal through skin contact in small amounts. This material can be absorbed through the skin and eyes. Symptoms may include redness, pain, and skin burns. Symptoms may be delayed.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: This material is toxic in small amounts orally, and can cause adverse health effects or death.

Chronic Symptoms: May cause hypocalcemia (hypocalcaemia), which is the presence of low serum calcium levels in the blood. Symptoms include neuromuscular irritability, involuntary contraction of muscles, bronchospasm, tingling in hands/feet/lips, muscle weakness, seizures, slow or uneven heartbeat, lightheadedness, mood changes, and confusion. May also cause fluorosis, which is a bone and dental disease caused by excessive consumption of fluoride. Symptoms include increased frequency of fracture, impaired joint mobility, joint pain, ruptures of stomach lining, nausea.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

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Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Fluorine compounds. May release corrosive vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Use only outdoors or in a well-ventilated area. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up.

Incompatible Products: Strong acids, strong bases, strong oxidizers. Glass. Metals. Attacks some forms of plastics, rubber, and coatings.

7.3. Specific End Use(s)

No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Proprietary Chemical		
USA ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA ACGIH	ACGIH Ceiling (ppm)	2 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA ACGIH	Biological Exposure Indices (BEI)	3 mg/g Kreatinin (Medium: urine - Time: prior to shift - Parameter: Fluoride (background, nonspecific) 10 mg/g Kreatinin (Medium: urine - Time: end of shift - Parameter: Fluoride (background, nonspecific)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	2.5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	3 ppm

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USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (ppm)	6 ppm
USA IDLH	US IDLH (ppm)	30 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	3 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when toxic gases may be released.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Face shield. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing. A full face shield is recommended.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Solubility	: No data available
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Glass. Metal. Attacks some forms of plastics, rubber, and coatings.
- 10.6. Hazardous Decomposition Products:** None known.

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SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on Toxicological Effects****Acute Toxicity:** Oral: Toxic if swallowed. Dermal: Fatal in contact with skin. Inhalation:vapour: Harmful if inhaled.

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ATE (Oral)	119.04 mg/kg body weight
ATE (Dermal)	119.05 mg/kg body weight
ATE (Vapors)	12.67 mg/l/4h
Proprietary Chemical	
LC50 Inhalation Rat	850 mg/l/4h (Exposure time: 4 h)
LC50 Inhalation Rat	0.532 mg/l/4h
ATE (Oral)	5.00 mg/kg body weight
ATE (Dermal)	5.00 mg/kg body weight

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.**Serious Eye Damage/Irritation:** Causes serious eye damage.**Respiratory or Skin Sensitization:** Not classified**Germ Cell Mutagenicity:** Not classified**Carcinogenicity:** Not classified**Reproductive Toxicity:** Not classified**Specific Target Organ Toxicity (Single Exposure):** Not classified**Specific Target Organ Toxicity (Repeated Exposure):** Not classified**Aspiration Hazard:** Not classified**Symptoms/Injuries After Inhalation:** Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Symptoms of respiratory complications (lung oedema) may occur several hours after.**Symptoms/Injuries After Skin Contact:** This material is fatal through skin contact in small amounts. This material can be absorbed through the skin and eyes. Symptoms may include redness, pain, and skin burns. Symptoms may be delayed.**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.**Symptoms/Injuries After Ingestion:** This material is toxic in small amounts orally, and can cause adverse health effects or death.**Chronic Symptoms:** May cause hypocalcemia (hypocalcaemia), which is the presence of low serum calcium levels in the blood. Symptoms include neuromuscular irritability, involuntary contraction of muscles, bronchospasm, tingling in hands/feet/lips, muscle weakness, seizures, slow or uneven heartbeat, lightheadedness, mood changes, and confusion. May also cause fluorosis, which is a bone and dental disease caused by excessive consumption of fluoride. Symptoms include increased frequency of fracture, impaired joint mobility, joint pain, ruptures of stomach lining, nausea.**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity****Ecology - General** : Not classified.

Proprietary Chemical	
EC50 Daphnia 1	270 mg/l (Exposure time: 48 h - Species: Daphnia species)
NOEC Chronic Crustacea	14.1 mg/l

12.2. Persistence and Degradability

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Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

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Bioaccumulative Potential	Not established.

Proprietary Chemical	
BCF Fish 1	(no bioaccumulation)
Log Pow	-1.4

12.4. Mobility in Soil No additional information available**12.5. Other Adverse Effects****Other Information** : Avoid release to the environment.**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste Treatment Methods****Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, and international regulations.

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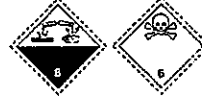
Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name : HYDROFLUORIC ACID with not more than 60 percent strength
Hazard Class : 8
Identification Number : UN1790
Label Codes : 8, 6.1
Packing Group : II
ERG Number : 157



14.2. In Accordance with IMDG

Proper Shipping Name : HYDROFLUORIC ACID
Hazard Class : 8
Subsidiary Risk(s) : 6.1
Identification Number : UN1790
Packing Group : II
Label Codes : 8, 6.1
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B



14.3. In Accordance with IATA

Proper Shipping Name : HYDROFLUORIC ACID
Packing Group : II
Identification Number : UN1790
Hazard Class : 8
Label Codes : 8, 6.1
Subsidiary Risk(s) : 6.1
ERG Code (IATA) : 8P



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Proprietary Chemical	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	100
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State Regulations

Proprietary Chemical	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/16/2016
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Dermal)	Acute toxicity (dermal) Category 2
Acute Tox. 2 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation:vapor)	Acute toxicity (inhalation:vapor) Category 4

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Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H300	Fatal if swallowed
H301	Toxic if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H330	Fatal if inhaled
H332	Harmful if inhaled

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)