

# Safety Data Sheet

## Advantage Arrest Silver Diamine Fluoride 38%

### Section 1 - Chemical Product and Company Identification

**Product Name:** Advantage Arrest  
**Synonyms:** Silver Diamine Fluoride 38%  
**Company Identification:** Elevate Oral Care  
 346 Pike Rd Suite 5  
 West Palm Beach, FL 33411  
**For information, call:** 877-866-9113  
**Emergency Number:** 877-866-9113 or poison control.  
**Product Use:** Dental, for use in prevention/treatment of dentinal hypersensitivity  
**Limitations:** For use by Dental Professionals

### Section 2 - Composition, Information on Ingredients

**Pictograms:** 
**Signal Words:** Causes erosion of glass and metals.  
 Light sensitive liquid. Store in a cool dry place in closed original container

Corrosive to metal or glass.

Ag(NH<sub>3</sub>)<sub>2</sub>F

CAS # - 34445-07-3

CAS #	Ingredient	Percentage
7440-22-4	Silver (Ag)	24 - 27
1336-21-6	Ammonia (NH <sub>3</sub> )	7.5 - 11
16984-48-8	Fluoride (F)	5 - 6
3844-45-9	FD&C Blue #1	<1
7732-18-5	Deionized Water	<= 62.5

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

<b>Appearance:</b>	Transparent blue liquid with ammonia odor
<b>Physical Form (General &amp; Specific):</b>	Liquid, specific gravity 1.25
<b>Immediate Health, Physical and Environmental Hazards:</b>	Light sensitive liquid. Store in a cool dry place in closed original container. Prolonged exposure to light or evaporation will cause precipitation. 1, GHS08, H372

### POTENTIAL HEALTH EFFECTS

This material is corrosive to metal and glass.

**Eye Contact:**

Rinse open eyes with running water for 15 minutes. Seek medical attention immediately.

**Skin Contact:**

Remove clothing that has contacted product. Wash exposed area immediately with running water. Calcium containing gel (KY jelly and 10% Calcium Gluconic Acid) may be applied to the area.

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

*Prolonged or repeated exposure may cause:*

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure. May be absorbed following inhalation and cause target organ effects.

**Ingestion:**

May be harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Carcinogenicity:**

May cause mottled teeth and fluorosis on bones with repeated exposure.

## Section 4 - First Aid Measures

### FIRST AID PROCEDURES

**Eye Contact:** Flush eyes with large amounts of water. Get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention if needed. Wash contaminated clothing and clean shoes before reuse. Calcium containing gel (KY jelly and 10% Calcium Gluconic Acid) may be applied to the area.

**Inhalation:** If signs/symptoms develop, get medical attention. Move victim to fresh air, loosen tight clothing, provide oxygen if difficulty breathing.



**If Swallowed:** Do not induce vomiting, give victim 100-200 ml of milk water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

## Section 5 - Fire Fighting Measures

### EXTINGUISHING MEDIA

This material is not flammable.  
Small fire, use powder, carbon dioxide, or water shower.  
Large fire, use water shower, water mist or foam extinguisher.  
May produce irritating, corrosive or toxic fumes.

### PROTECTION OF FIRE FIGHTERS

#### Special Fire Fighting Procedures:

**Unusual Fire and Explosion Hazards:** Contact with reactive metals may produce flammable hydrogen gas. Firefighters should use protective masks for acidic gasses.

## Section 6 - Accidental Release Measures

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Cover, but do not seal for 48 hours. Recover any material possible into a closed container. Wear protective gloves, mask, boots, goggles and other materials for splash prevention.

### ENVIRONMENTAL PRECAUTIONS

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a metal, LDPE or HDPE container approved for use in transportation by appropriate authorities. If other material, the container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene.

#### Clean-up methods

Observe precautions from other sections. Determine if spill qualifies for local, state or federal reporting.

## Section 7 - Handling and Storage

### HANDLING

Avoid breathing of vapors, mists or spray. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Avoid eye and skin contact. Wash hands after handling and before eating.

### STORAGE

Store in a dark, cool, dry place away from acids, alkaline materials, heat, and bleach. Store containers in a controlled, secure environment and do not agitate drop, drag or otherwise damage containers.

## Section 8 - Exposure Controls, Personal Protection

### ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation, or in a well-ventilated area.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Eye/Face/Body Protection

Avoid eye contact. The following eye protection is recommended: Safety Glasses, gloves, apron/smock/scrubs.

#### Skin Protection

Avoid prolonged or repeated skin contact.

#### Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing vapors, mists or spray.

#### Prevention of Swallowing

Do not ingest. Wash hands after handling and before eating.

### EXPOSURE GUIDELINES

Occupational Safety & Health Administration (OHSA) exposure standards for Silver Diamine Fluoride are:

Ingredient	Authority	Type	Limit	Additional Information
Silver Diamine Fluoride	OSHA	STEL, as F	2 ppm	
Silver Diamine Fluoride	OSHA	TWA, as F	0.5 ppm	
FLUORIDES	OSHA	TWA, as F	2.5 mg/m3	

## Section 9 - Physical and Chemical Properties

<b>Odor, Color, Grade:</b>	Clear liquid with ammonia smell
<b>Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	<i>non flammable</i>
<b>Flash Point</b>	<i>non flammable</i>
<b>Flammable Limits(LEL)</b>	<i>non flammable</i>
<b>Flammable Limits(UEL)</b>	<i>non flammable</i>
<b>Boiling Point</b>	<i>No Data Available</i>
<b>Density</b>	<i>No Data Available</i>
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Vapor Pressure</b>	<i>No Data Available</i>
<b>Specific Gravity</b>	1.35
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	<i>Not Applicable</i>
<b>Solubility in Water</b>	<i>this material is a water solution</i>
<b>Also Soluble in</b>	<i>No Data Available</i>
<b>Evaporation rate</b>	<i>No Data Available</i>
<b>Kow - Oct/Water partition coef</b>	<i>Not Applicable</i>
<b>Viscosity</b>	<i>No Data Available</i>

## Section 10 - Stability and Reactivity

**Stability:** Stable in a sealed, opaque, corrosion resistant container.

### CONDITIONS TO AVOID

Heat

### MATERIALS TO AVOID

Acids, Metals, Glass. Causes erosion of glass and metals.

**Hazardous Polymerization:** Hazardous polymerization will not occur.

Electric or static electric discharge will not occur.

### Hazardous Decomposition or By-Products

Substance	Condition
silicone tetra-fluoride	with contact to glass or silica
Hydrogen gas	with contact to metals
Hydrogen Fluoride	with heating

## Section 11 - Toxicological Information

<b>Hazardous ingredients:</b>	SODIUM FLUORIDE ORL MUS LD50 57 mg/kg ORL RAT LD50 52 mg/kg SCU RAT LD50 175 mg/kg
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## Section 12 - Ecological Information

**Ecotoxicity:** Not Determined  
**Chemical Fate:** Not Determined  
**Physical:** No information available  
**Other:** No information available  
**Mobility:** Readily absorbed into air, water and soil  
**Persistence and degradability:** no data  
**Bioaccumulative potential:** No bioaccumulation data

## Section 13 - Disposal Considerations

**Waste Disposal Method:** Neutralize with slurry of calcium hydroxide (monitor heat generation) and pH of supernatant solution should range from 5.8-8.6. Monitor F and N content before disposal.



Follow local, regional, state and national guidelines.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

Precautions: Avoid direct sunlight, avoid damage to container that can result in fluid leakage.

The goods are not regulated for transport by IATA.

	US DOT
<b>Shipping Name:</b>	Aqueous Silver Diamine Fluoride 38%
<b>Hazard Class:</b>	GHS05, GHS08
<b>UN Number:</b>	None
<b>Packing Group:</b>	None

## Section 15 - Regulatory Information

### US FEDERAL

#### Classification:

Corrosive to metal 1, Skin Corrosive 1B, Eye Damage 1, STOT RE 1

#### TSCA

Unknown

#### SARA Codes

34445-07-3

#### 311/312 Hazard Categories:

H290: May be corrosive to metals.

H214: Causes severe skin burns and eye damage.

H318: Causes severe eye damage.

H335: May cause respiratory irritation.

H372: Causes damage to organs (bone, teeth) through prolonged or repeated exposure.

#### Precautionary Statements

P260: Do not breathe dust/fume/gas/mist/vapor/spray

P264: Wash hands thoroughly after handling

P270: Do not eat, drink or smoke while handling this product.

P272: Contaminated work clothing should not be allowed out of the work area.

P273: Avoid release to the environment.

P280: Wear protective gloves/clothing/face/eye protection.



### **Response Statements**

P303 & P361: If on skin or hair, Remove contaminated clothing, rinse with water/shower.

P304 & P340: If inhaled, move victim to fresh air in a resting position comfortable for breathing.

P305, P351 & P338: If in eyes, remove contact lenses (if present) rinse with water for several minutes.

P309, P311 & P314: If exposed and you feel unwell, call poison control and seek medical attention immediately.

P363: Wash contaminated clothing before re-use.

P390: Absorb spills to prevent damage.

### **Storage & Disposal Statements**

P405: Store in a locked location.

P460: Store in a corrosive resistant container with resistant inner liner

P501: Dispose of contents/container in accordance with local/regional/national regulations.

### **Safety Phrases:**

S 7 Keep container tightly closed.

S24 Avoid contact with skin

S37 Wear suitable gloves

## **Section 16 - Additional Information**

**MSDS Creation Date:** 04/07/2015

**Revision #1 Date:** N/A

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