

# Safety Data Sheet

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Revision Date: 12/02/2015 Date of issue: 10/27/2014

Version: 2.0

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:**

**Synonyms:** Fresh Water AG+™,

### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Spa water sanitization and disinfection

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

Company

### 1.4. Emergency Telephone Number

**Emergency Number** : (CHEMTREC US) 800-424-9300 (CHEMTREC International) 703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture Classification (GHS-US)

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

### 2.2. Label Elements GHS-US Labeling



**Hazard Pictograms (GHS-US)** :

GHS09

**Signal Word (GHS-US)**

: Warning

**Hazard Statements (GHS-US)**

: H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements (GHS-US)**

: P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

### 2.3. Other Hazards

**Other Hazards:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

### 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	%	Classification (GHS-US)
Zinc	(CAS No) 7440-66-6	50 - 70	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Aluminum oxide	(CAS No) 1344-28-1	20 - 40	Aquatic Acute 3, H402
Silver	(CAS No) 7440-22-4	0.92	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

**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 if possible).

**First-aid Measures After Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

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

**4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms/Injuries:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

**4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed** If you feel unwell, seek medical advice (show the label where possible).

**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.

**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. **Other information:** Refer to Section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, 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 Responders**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Stop spill if safe to do so. Ventilate area. **6.2.**

**Environmental Precautions**

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

**6.3. Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. **6.4. Reference to Other Sections**

See Heading 8. Exposure controls and personal protection.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for Safe Handling**

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**7.2. Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. **Incompatible Products:** Strong acids. Strong bases. Strong oxidizers. **7.3. Specific End Use(s)**

Spa water sanitization and disinfection.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control Parameters**

Silver (7440-22-4)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>

Aluminum oxide (1344-28-1)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>

**8.2. Exposure Controls****Appropriate Engineering Controls**

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

**Personal Protective Equipment** : Protective goggles. Gloves. Protective clothing.



**Materials for Protective Clothing** : Chemically resistant materials and fabrics.  
**Hand Protection** : Wear chemically resistant protective gloves.  
**Eye Protection** : Chemical goggles or safety glasses.  
**Skin and Body Protection** : Wear suitable protective clothing.  
**Respiratory Protection** : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.  
**Environmental Exposure Controls** : Do not allow the product to be released into the environment.  
**Consumer Exposure Controls** : Do not eat, drink or smoke during use.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

**Physical State** : Solid  
**Appearance** : Mixture of grey colored spheres and zinc shot  
**Odor** : None  
**Odor Threshold** : No data available  
**pH** : No data available  
**Relative Evaporation Rate (butylacetate=1)** : No data available  
**Melting Point** : 2040 °C 3704 °F (Aluminum Oxide)  
**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  
**Specific Gravity** : 2  
**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. Ignition sources. Incompatible materials.

**10.5 Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**10.6 Hazardous Decomposition Products:** Silver oxides. Aluminium oxides. Zinc oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects Acute

**Toxicity:** Not classified

Silver (7440-22-4)	
LD50 Oral Rat	> 2000 mg/kg

Aluminum oxide (1344-28-1)	
LD50 Oral Rat	> 15900 mg/kg
LC50 Inhalation Rat	> 2.3 mg/l/4h

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**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:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General**

: Very toxic to aquatic life with long lasting effects.

Silver (7440-22-4)	
LC50 Fish 1	0.00155 - 0.00293 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

<b>LC 50 Fish 2</b>	0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
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<b>Aluminum oxide (1344-28-1)</b>	
<b>LC50 Fish 1</b>	14.6 mg/l
<b>EC50 Daphnia 1</b>	38.2 mg/l
<b>NOEC (acute)</b>	> 50 mg/l

<b>Zinc (7440-66-6)</b>	
<b>LC50 Fish 1</b>	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
<b>EC50 Daphnia 1</b>	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
<b>LC 50 Fish 2</b>	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

**12.2. Persistence and Degradability** No additional information available

**12.3. Bioaccumulative Potential** No additional information available

**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 waste material in accordance with all local, regional, national, and international regulations.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

**14.1 In Accordance with DOT**



**Proper Shipping Name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.(contains silver, aluminum oxide, zinc)

**Hazard Class** : 9 **Identification Number** : UN3077 **Label Codes** : 9

**Packing Group** : III

**Marine Pollutant** : Marine pollutant

**ERG Number** : 171

**14.2 In Accordance with IMDG**



**Proper Shipping Name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(contains silver, aluminum oxide, zinc)

**Hazard Class** : 9

**Identification Number** : UN3077

**Packing Group** : III

**Proper Shipping Name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(contains silver, aluminum oxide, zinc)

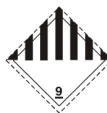
**Packing Group** : III

**Label Codes** : 9 **EmS-No. (Fire)** : F-A **EmS-No. (Spillage)** : S-F

**Marine pollutant** : Marine pollutant

**14.3 In Accordance with IATA**

**Identification Number** : UN3077 **Hazard Class** : 9 **Label Codes** : 9 **ERG Code (IATA)** : 9L



## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

#### PRECAUTIONARY STATEMENT

Hazards to Humans and Domestic Animals.

#### CAUTION

In the unlikely event that a cartridge breaks, mineral media should not be ingested by humans or animals as it may cause gastric distress.

#### FIRST AID IF INGESTED:

Call poison control center or doctor immediately for treatment advice.

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<b>Silver (7440-22-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>RQ (Reportable quantity, section 304 of EPA's List of Lists) :</b>	1000 lb < 100 um CERCLA/SARA RQ CHANGE TITLE
<b>SARA Section 313 - Emission Reporting</b>	1.0 %

<b>Aluminum oxide (1344-28-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (fibrous forms)

<b>Zinc (7440-66-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (dust or fume only)

### 15.2 US State Regulations

<b>Silver (7440-22-4)</b>
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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

**Aluminum oxide (1344-28-1)**

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

**Zinc (7440-66-6)**

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** : 12/02/2015  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**GHS**

<b>Full Text</b>	Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
	Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
	Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
	H400	Very toxic to aquatic life
	H402	Harmful to aquatic life
	H410	Very toxic to aquatic life with long lasting effects

**Phrases:**

*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.*

12/02/2015