

## Material Safety Data Sheet

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** HRR ESSISTENCE

**Part Number:** none                      **Chemical Family:** Coagulating/Flocculating Blend

**Manufacturer's Name:** Siemens Industry, Inc. - Water Technologies Business Unit

**Manufacturer's Address:** 595 Industrial Drive Bradley, IL 60915

**Product/Technical Information Phone Number:** (815) 932-8154

**Medical/Handling Emergency Phone Number:** CHEMTREC (800) 424-9300  
24 hours a day

**Transportation Emergency Phone Number:** CHEMTREC (800) 424-9300  
24 hours a day

**Issue Date:** April 18, 2001

**Revision Date/Revision Number:** April 11, 2011/Rev. #3

### SECTION 2 – COMPOSITION INFORMATION

**Chemical Name**

**CAS#**

Aluminum Sulfate

10043-01-3

Polyaluminum Hydroxychlorosulfate Solution

1327-41-9

Ingredients listed in this section have been determined to be hazardous as defined in 29 CFR 1910.1200. Materials determined to be health hazards are listed if they comprise 1% or more of the composition. Materials identified as carcinogens are listed if they comprise 0.1% or more of the composition.

### SECTION 3 – HAZARDS IDENTIFICATION

**Appearance & Odor:** clear to white liquid

**Emergency Overview:** This product contains components which may cause irritation to the eyes, mucous membranes, respiratory tract, and on abraded skin.

**Fire & Explosion Hazards:** May decompose to form Hydrochloric acid and Sulfur dioxide in a fire.

**Primary Route(s) of Exposure:** inhalation of vapors, skin contact, ingestion

**Inhalation – Acute Effects:** Inhalation of vapors may cause mucous membrane irritation.

**Skin Contact – Acute Effects:** Skin contact may cause irritation.

**Eye Contact – Acute Effects:** Eye contact may cause irritation.

**Ingestion – Acute Effects:** Symptoms following ingestion can range from mild cramping and nausea to severe vomiting depending on the amount ingested.

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### SECTION 4 – FIRST AID MEASURES

**Inhalation First Aid:** Remove affected person from area to fresh air and provide oxygen if breathing is difficult. Give artificial respiration ONLY if breathing has stopped and give CPR ONLY if there is no breathing and no pulse. Obtain medical attention.

**Skin Contact First Aid:** Immediately remove clothing from affected area and wash skin for 5 minutes with flowing water and soap. Clothing should be washed before reuse. Obtain medical assistance if irritation develops. DO NOT instruct person to neutralize affected skin area.

**Eye Contact First Aid:** Immediately irrigate eyes with flowing water continuously for 15 minutes while holding eyes open. Contacts should be removed before or during flushing. Seek medical assistance if irritation develops. DO NOT instruct person to neutralize.

**Ingestion First Aid:** Do not induce vomiting. If victim is alert and not convulsing rinse mouth with water and give plenty of water to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing in of vomitus. Rinse mouth again and give more water to drink. Obtain medical attention.

**Medical Conditions Aggravated:** none known

**Note to Physician:** Treat patient symptomatically.

### SECTION 5 – FIRE FIGHTING MEASURES

**Flash Point/Method:** will not burn

**Auto Ignition Temperature:** not applicable

**Upper/Lower Explosion Limits:** not applicable

**Extinguishing Media:** water

**Fire Fighting Procedures:** Wear self-contained breathing apparatus.

**Fire & Explosion Hazards:** May decompose to form Hydrochloric acid and Sulfur dioxide in a fire.

**Hazardous Products of Decomposition and/or Combustion:** May decompose to form Hydrochloric acid and Sulfur dioxide in a fire.

**NFPA Ratings:**

HEALTH- 1    FLAMMABILITY- 0    REACTIVITY- 1    OTHER- none

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

Contain major spills to keep out of water sources and sewers. Minor spills may be washed to a chemical sewer, neutralized with soda ash or absorbed with an inert material.

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### SECTION 7 – HANDLING AND STORAGE

**Handling:** Use appropriate personal protective equipment to prevent contact with eyes, skin and clothing. Use safe chemical handling procedures suitable for the hazards presented by this material. **KEEP OUT OF REACH OF CHILDREN**

**Storage:** Product will slowly corrode iron, brass, copper, aluminum and mild steel. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**General Comments:** Empty containers may contain product residue-follow all precautions for the product even when container is empty.

### SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

**Respiratory Protection:** None required for normal use.

**Skin Protection:** Wear neoprene gloves to prevent skin contact.

**Eye Protection:** Wear safety glasses or goggles.

**Ventilation Protection:** None required for normal use.

**Other Protection:** Eye wash fountains, or other means of washing the eyes with a gentle flow of cool to tepid tap water, should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

#### Exposure Limits:

Aluminum sulfate TLV (as Al soluble salt): ppm; 2 mg/m<sup>3</sup> (ACGIH 1993-1994)  
Polyaluminum Hydroxychlorosulfate PEL: 2mg/cu.m. TLV: 2mg/cu.m.

### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance & Odor:** clear to white liquid

**Vapor Pressure:** NIL

**Vapor Density (Air=1):** same as water

**Boiling Point:** 110°C

**Melting Point:** not applicable

**Specific Gravity:** 1.13

**Solubility in Water:** completely miscible

**Volatile Percentage:** NIL

**pH:** 3.25

**Flash Point/method:** will not burn

**Auto Ignition Temperature:** not applicable

**Upper/Lower Explosion Limits:** not applicable

### SECTION 10 – STABILITY AND REACTIVITY

**Stability:** stable

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**Incompatibilities:** alkalis

**Polymerization:** will not occur

**Decomposition:** May decompose to form Hydrochloric acid and Sulfur dioxide in a fire.

**Conditions to Avoid:** heat and alkaline conditions

### SECTION 11 – TOXICOLOGICAL INFORMATION

**Inhalation – Acute:** Inhalation of vapors may cause mucous membrane irritation.

**Inhalation – Chronic:** There are no known chronic inhalation effects.

**Skin Contact – Acute:** Skin contact may cause irritation.

**Skin Contact – Chronic:** There are no known chronic dermal effects.

**Eye Contact – Acute:** Eye contact may cause irritation.

**Ingestion – Acute:** The oral LD50 (mouse) for Aluminum sulfate is 6207 mg/kg. Symptoms following ingestion can range from mild cramping and nausea to severe vomiting depending on the amount ingested.

**Ingestion – Chronic:** There are no known chronic ingestion effects.

**Carcinogenicity/Mutagenicity:** No carcinogenic or mutagenic effects for this product are known.

**Reproductive Effects:** No reproductive effects for this product are known.

**Neurotoxicity:** No neurotoxic effects for this product are known.

**Other Effects:** No other toxic effects for this product are known.

**Target Organs:** Target organs include the eyes, skin, respiratory system, and digestive tract.

### SECTION 12 – ECOLOGICAL INFORMATION

No information available.

### SECTION 13 – DISPOSAL CONSIDERATIONS

Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than federal regulations.

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### SECTION 14 – TRANSPORTATION INFORMATION

**DOT Shipping Description:** CORROSIVE LIQUID, N.O.S.  
8, UN 1760, PG III

DOT Emergency Response Guide: 154

### SECTION 15 – REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4): yes (CAS#10043-01-3) RQ: 5,000 lbs

SARA SECTION 302 (40CFR355.30): no

SARA SECTION 304 (40CFR355.40): no

SARA SECTION 313 (40CFR372.65): no

OSHA PROCESS SAFETY (29CFR1910.119): no

CALIFORNIA PROPOSITION 65: no

### SECTION 16 – OTHER INFORMATION

**Disclaimer:** The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the user thereof. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial and local laws.

**Revision Indicator:** April 2011, Revised Section 1 (Updated manufacturer's name)