

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: HRR ENHANCER

Part Number: none **Chemical Family:** Peroxygen salt

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: October 12, 2001

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SECTION 2 – COMPOSITION INFORMATION

Chemical Name	CAS#
Magnesium carbonate	546-93-0
Potassium bisulfate	7646-93-7
Potassium peroxymonosulfate	10058-23-8
Potassium sulfate	7778-80-5

Ingredients listed in this section have been determined to be hazardous as defined in 29CFR 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: odorless white granular free flowing substance

Emergency Overview: Oxidizer. Harmful if swallowed. May cause eye, skin and respiratory system irritation or burns. May cause sensitization by inhalation and skin contact. Contact with combustible material may cause fire.

Fire & Explosion Hazards: Grinding or intensive mixing may generate sufficient heat to fuse product and cause ignition of oxidizable material present. This substance is an oxidizer and contact with reducing agents or combustibles may cause ignition.

Primary Route(s) of Exposure: skin contact

Inhalation – Acute Effects: May be harmful if inhaled. Causes respiratory tract irritation. May cause severe allergic respiratory reaction.

Skin Contact – Acute Effects: Skin contact causes irritation and/or burns.

Eye Contact – Acute Effects: Eye contact causes severe eye irritation and/or severe burns.

Ingestion – Acute Effects: Harmful if swallowed. Ingestion may cause nausea, vomiting, lethargy and diarrhea.

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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 15 minutes with flowing water and soap. Clothing should be washed before reuse. Obtain medical assistance. 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. Obtain medical assistance immediately. 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: Asthma may be aggravated by exposure.

Note to Physician: Treat patient symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point/Method: not applicable, will not burn

Auto Ignition Temperature: not applicable, will not burn

Upper/Lower Explosion Limits: not applicable, will not burn

Extinguishing Media: Product is not flammable. In case of fire, soak (flood) with water and use fire-fighting measures that suit the surrounding fire.

Fire Fighting Procedures: Use water to cool containers exposed to fire. May use other extinguishing agents suitable for surrounding materials. Firefighters should wear self-contained breathing apparatus and full protective gear.

Fire & Explosion Hazards: Grinding or intensive mixing may generate sufficient heat to fuse product and cause ignition of oxidizable material present. This substance is an oxidizer and contact with reducing agents or combustibles may cause ignition.

Hazardous Products of Decomposition and/or Combustion: oxygen gas, sulfur dioxide

NFPA Ratings:

HEALTH- 2 FLAMMABILITY- 0 REACTIVITY- 1 OTHER- none

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Sweep up spill immediately. Flood spill area with water in compliance with State and Federal Regulations.

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SECTION 7 – HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Avoid breathing dust or vapor. Do not mix this product with any other chemical. Fire or explosion may result. Always add this product to water, never the reverse.

Storage: Store in a cool, dry, well ventilated area. Keep away from heat and combustible materials. Avoid contact with alkalis. **KEEP OUT OF REACH OF CHILDREN.**

General Comments: Use safe chemical handling procedures suitable for the hazards presented by this material. 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: The level of respiratory protection needed should be based on the required protection factor after evaluating chemical exposures using appropriate industrial hygiene monitoring.

Skin Protection: Wear neoprene or rubber gloves, boots, aprons and/or impermeable suit to avoid skin contact.

Eye Protection: Wear safety glasses with side shields or goggles.

Ventilation Protection: Use local exhaust ventilation. Special exhaust not required.

Other Protection: Safety showers, with quick opening valves which stay open, and 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: MAGNESIUM CARBONATE:

ACGIH TLV-TWA: ppm; 10 mg/m³

OSHA PEL: TWA 15 mg/m³ (total) TWA 5 mg/m³ (resp)

NIOSH REL: TWA 10 mg/m³ (total) TWA 5 mg/m³ (resp)

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: odorless white granular free flowing substance

Vapor Pressure: nil

Vapor Density (Air=1): not volatile

Boiling Point: decomposes

Melting Point: decomposes

Specific Gravity: 1.1-1.4

Solubility in Water: >25% AT 20°C (68°F)

Volatile Percentage: not volatile

pH: not determined

Flash Point/method: not applicable, will not burn

Auto Ignition Temperature: not applicable, will not burn

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Upper/Lower Explosion Limits: not applicable, will not burn

SECTION 10 – STABILITY AND REACTIVITY

Stability: Temperatures above 240-250°C (464-482°F) may cause this product to become unstable.

Incompatibilities: Reacts (possibly violently) with reducing agents, flammable substances, cyanides, certain organic materials and alkalis. Heavy Metals cause evolution of Oxygen gas.

Polymerization: Hazardous polymerization will not occur.

Decomposition: oxygen gas, sulfur dioxide

Conditions to Avoid: Avoid contact with heat and all incompatible substances.

SECTION 11 – TOXICOLOGICAL INFORMATION

Inhalation – Acute: The 4 hour inhalation LC50 (rat) is >5 mg/kg. May be harmful if inhaled. Causes respiratory tract irritation. May cause severe allergic respiratory reaction.

Inhalation – Chronic: May cause allergic reactions by inhalation.

Skin Contact – Acute: Skin contact causes irritation and/or burns.

Skin Contact – Chronic: Persulfates may cause dermatitis and skin rashes. May cause allergic reactions by skin contact.

Eye Contact – Acute: Eye contact causes severe eye irritation and/or severe burns.

Ingestion – Acute: Harmful if swallowed. Ingestion may cause nausea, vomiting, lethargy and diarrhea.

Ingestion – Chronic: Ingestion may cause gastritis, possibly progressing to necrosis or hemorrhage.

Carcinogenicity/Mutagenicity: There are no known carcinogenic/mutagenic effects.

Reproductive Effects: There are no known reproductive effects.

Neurotoxicity: There are no known neurotoxic effects.

Other Effects: There are no other known toxic effects.

Target Organs: skin, eyes, respiratory tract and digestive tract

SECTION 12 – ECOLOGICAL INFORMATION

No information is available.

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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.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Shipping Description: Corrosive solid, acidic, inorganic, N.O.S.
(Monopersulfate Compound)
8, UN3260, PG III

SECTION 15 – REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4): no RQ: none
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)