



Material Safety Data Sheet

HSI 415

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HERITAGE SYSTEMS HSI 415

OTHER/GENERIC NAMES: Mixture of Aluminum Sulfate and Organic Coagulant

PRODUCT USE: Water purification

MANUFACTURER: Heritage Systems Inc.
2471 Solano Ave Suite 141
Napa, CA. 94558

FOR MORE INFORMATION CALL: 707-258-0553

IN CASE OF EMERGENCY CALL: 800-535-5053
(24 Hours/Day, 7 Days/Week)

(Monday-Friday, 9:00am-4:30pm)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Aluminum Sulfate	1327-41-9	<45

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard.*

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A clear, odorless, amber colored liquid. Can irritate the skin and eyes. Not flammable, but may release toxic vapors if decomposed in a fire.

POTENTIAL HEALTH HAZARDS

SKIN: May cause skin irritation.

EYES: May irritate or burn the eyes.

INHALATION: Product mists may cause irritation.

INGESTION: May cause irritation and/or burns to mouth and stomach.

DELAYED EFFECTS: None known.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section.			

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4. FIRST AID MEASURES

SKIN: Flush with plenty of water, removing contaminated clothing. If irritation develops, get medical attention.

EYES: Immediately flush with water, continuing for at least 15 minutes. If irritation persists, get medical attention.

INHALATION: Promptly remove to fresh air.

INGESTION: If conscious, immediately give large quantity of water or milk. DO NOT INDUCE VOMITING. Get medical assistance.

ADVICE TO PHYSICIAN: Treat symptomatically

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not flammable
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
UPPER FLAME LIMIT (volume % in air):	Not applicable
LOWER FLAME LIMIT (volume % in air):	Not applicable
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:

All standard agents.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Use self-contained breathing apparatus. Use water spray to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.)

Contain large spills with clay or other inert materials. If permitted by regulation, neutralize with alkali. Carbon dioxide may evolve if neutralized with carbonates (e.g. soda ash). Collect liquid and/or residue and dispose of in accordance with applicable regulations.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (See section 8 for recommended personal protective equipment.)

Avoid contact with skin, eyes and clothing. Do not breathe product mists.

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STORAGE RECOMMENDATIONS:

Store in a cool area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Use local exhaust if misting is anticipated.

PERSONAL PROTECTIVE EQUIPMENT

- SKIN PROTECTION:** Wear impervious (e.g. rubber) gloves and apron and full work clothing including long sleeved shirts, trousers and boots. Full impervious clothing is recommended if prolonged product contact is anticipated.
- EYE PROTECTION:** Wear chemical safety goggles. Do not wear contact lenses.
- RESPIRATORY PROTECTION:** A NIOSH approved mist respirator should be worn in areas where product mists are present.
- ADDITIONAL RECOMMENDATIONS:** The presence of an eye-wash and safety shower is recommended.

EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Aluminum Sulfate (as Aluminum)	2 mg/m ³	2 mg/m ³	None

¹ = Limit established by HSI

² = Workplace Environmental Exposure Level (AIHA).

³ = Biological Exposure Index (ACGIH).

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

None

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear amber liquid.
PHYSICAL STATE:	Liquid
MOLECULAR WEIGHT:	Mixture
CHEMICAL FORMULA:	Mixture
ODOR:	Odorless
SPECIFIC GRAVITY (water = 1.0):	~1.28
SOLUBILITY IN WATER (weight %):	100
pH:1.4	
BOILING POINT:	112.5°C
MELTING POINT:	-10°C
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY (air = 1.0):	Not applicable

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EVAPORATION RATE: Not determined **COMPARED TO:** Not applicable.
% VOLATILES: ~80
FLASH POINT: Not flammable
(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):
Stable under normal conditions. Avoid high temperatures.

INCOMPATIBILITIES:
Prolonged exposure to metals such as iron or steel which are subject to corrosion.

HAZARDOUS DECOMPOSITION PRODUCTS:
At elevated temperatures, HCl vapor may be generated.

HAZARDOUS POLYMERIZATION:
Will not occur

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:
Data not available.

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:
Data not available

OTHER DATA:
None

12. ECOLOGICAL INFORMATION

Data not available.

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number is: D002 (corrosive)

OTHER DISPOSAL CONSIDERATIONS:
If permitted by regulations, material may be neutralized with alkali.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

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14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: Not Regulated

US DOT ID NUMBER: UN 3264, 8, III

PROPER SHIPPING NAME: Corrosive liquid, acidic, inorganic, N.O.S. (Contains polyaluminum hydroxychloride

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: All ingredients listed on the TSCA Inventory

OTHER TSCA ISSUES: None

SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPQ (lb)</u>
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No ingredients listed in this section.

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
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No ingredients listed in this section.

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
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No ingredients listed in this section.

ADDITIONAL REGULATORY INFORMATION:

None listed

WHMIS CLASSIFICATION (CANADA):

E (corrosive based upon transportation classification) , D2B.

Classified in accordance with WHMIS Controlled Product regulations.

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FOREIGN CHEMICAL CONTROL INVENTORY STATUS:

All ingredients listed on Canadian DSL.

16. OTHER INFORMATION

CURRENT ISSUE DATE: January, 2003

PREVIOUS ISSUE DATE: February, 1998

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

Revised DOT classification.

OTHER INFORMATION: None