Product HSI 313
Revision Date 5/6/2015
Revision 1

Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name **HSI 313**
Identifier Uses Cooling Water Treatment.

Supplier
Heritage Systems, Inc.
2471 Solano Ave, Suite 141
Napa, CA. 94558
Tel: 707-258-0553

Contact Person services@heritagesystemsinc.com
Emergency Telephone 24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053

SECTION 2: HAZARDS IDENTIFICATION

Appearance Clear, pale yellow liquid.
Color Colorless to pale yellow
Odor Bland.

Pictogram(s)

Signal Word Warning

Hazard Statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary Statements
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P280 Wear protective gloves/ protective clothing/eye protection/face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P202 Do not handle until all safety precautions have been read and understood.

Contains Potassium Hydroxide

GHS Classification
Physical and Chemical Hazards Not classified
Human Health Skin Irrit. 2 – H315, Eye Irrit. 2 – H319
Environment Not classified

OSHA Regulatory Status This Product is Hazardous under the OSHA Hazard Communication Standard.

Inhalation Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion Rinse mouth thoroughly. Get medical attention if any discomfort continues.
Skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.
Eye contact Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Routes of Exposure Unknown

SECTION 3: Composition/Information on Ingredients

Composition Comments

Confidential business information has been removed without affecting the overall safety information on the safety data sheet.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Information	General first aid, rest, warmth and fresh air. Get medical attention.
Inhalation	Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed

General Information	As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing in an unconscious person.
Inhalation	Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.
Eye contact	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Routes of Exposure	Unknown

Most important symptoms and effects, both acute and delayed

Notes To The Physician	Treat Symptomatically.

SECTION 5: Firefighting Measures

Auto Ignition Temperature (°C)	No Information available
Flammability Limit - Lower (%)	No Information available
Flammability Limit - Upper (%)	No Information available
Flash point	No Information available
Extinguishing Media	Use fire-extinguishing media appropriate for surrounding materials. Water spray, foam, dry powder or carbon dioxide.
Hazardous combustion products	Oxides of carbon, possibly toxic phosphines.
Unusual Fire & Explosion Hazards	Dried residue can thermally decompose, giving off irritating and possibly toxic fumes.
Special Fire Fighting Procedures	Ventilate closed spaces before entering them. Water spray should be used to cool containers.
Protective equipment for fire-fighters	Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental Release Measures

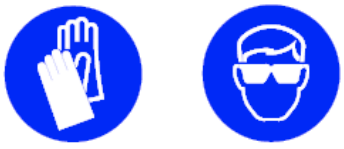
Personal Precautions	For personal protection, see section 8. In case of inadequate ventilation, use respiratory protection. Do not smoke, use open fire or other sources of ignition. In case of spills, beware of slippery floors and surfaces. No Information available.
Environmental Precautions	Do not discharge into drains, water courses or onto the ground.
Spill Clean Up Methods	Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer. Place into chemical waste container for disposal according to local, state or federal regulations. Neutralize residue with lime or soda ash and flush spill area. DO NOT TOUCH SPILLED MATERIAL! Wash thoroughly after dealing with a spillage.

SECTION 7: Handling and Storage

Handling	Product for external use - do not swallow. Avoid all contact with skin, eyes and clothes. Handle in accordance with user instructions on label Do not use contact lenses.
Usage Description	Cooling Water Treatment.
Storage Precautions	Store closed containers in a cool, dry, well-ventilated area away from incompatible materials. This product is stable under normal conditions of handling and storage. Avoid cold temperatures.
Specific End Use(s)	The identified uses for this product are detailed in Section 1

SECTION 8: Exposure Controls/Personal Protection

Protective Equipment



Component	STD	TWA (8 Hrs)		STEL (15 mins)		Notes
Potassium Hydroxide	OSHA		2mg/m^3			

Process Conditions	Provide eyewash, quick drench.
Engineering Measures	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
Respiratory Equipment	Not applicable in normal conditions of use. In case of insufficient ventilation, with the risk of Exceeding the Occupational Exposure Limits, wear suitable breathing apparatus. Particularly breathing apparatus, P2 type.
Hand Protection	When handling this product, it is recommended to wear chemical resistant gloves. The choice of suitable protective gloves depends on work conditions and what chemicals are handled, but we have positive experience with gloves made of Nitrile. Gloves should be replace immediately if sign of degradation is observed. Full contact: Material: butyl-rubber Minimum layer thickness: 0.3mm Breakthrough time: 480minSplash contact: Nitrile rubber Minimum layer thickness: 0.2mm Breakthrough time: 38min
Eye Protection	Wear approved safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Hygiene Measures	Wear approved safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance	Clear, pale yellow liquid.
Color	Colorless to pale yellow
Odor	Bland.
Odor Threshold - Lower	No Information available.
Odor Threshold - Upper	No Information available.
pH-Value, Conc. Solution	2.3
Melting point	32 °F
Initial boiling point and boiling range	212 °F
Flash point	No Information available
Evaporation rate	No Information available
Flammability State	No Information available
Flammability Limit - Lower (%)	No Information available
Flammability Limit - Upper (%)	No Information available
Vapor pressure	23.8 mm Hg
Vapor Density (air=1)	Not determined.
Relative density	1.063 68 °F
Bulk Density	No Information available
Solubility	Completely soluble in water
Decomposition temperature	No Information available
Partition coefficient; n-octanol/water	No Information available
Auto Ignition Temperature (°C)	No Information available
Viscosity	No Information available

Explosive Properties	No information available
Oxidizing properties	No Information available
Molecular Weight	No Information available
Volatile Organic Compound	Not determined

SECTION 10: Stability and Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable under normal temperature conditions and recommended use.
Hazardous Polymerization	Hazardous polymerization is not expected to occur under normal temperatures and pressures..
Hazardous Decomposition Products	Hazardous decomposition will result in the release of oxides of carbon, possibly toxic phosphines.
Conditions to Avoid	Avoid exposing to heat and contact with strong oxidizing substances.
Materials to Avoid	Do not mix with other chemicals unless listed on directions. Keep away from strong oxidizing materials and strong acids.

SECTION 11: Toxicological Information

Toxicological Information	No toxicological information for the overall finished product.
Acute Toxicity (Oral LD50)	>5012 mg/kg Rat
Acute Toxicity (Dermal LD50)	>1426 mg/kg Rabbit
Acute Toxicity (Inhalation LD50)	Not determined.
Skin Corrosion/Irritation	No Information available.
Respiratory Sensitization	No Information available.
Skin Sensitization	No Information available.
Reproductive Toxicity:	No Information available.
Germ Cell Mutagenicity:	
Genotoxicity - In Vitro	
Genotoxicity - In Vivo	
Carcinogenicity:	
Carcinogenicity	No Information available.
NTP - Carcinogenicity	The product and its components are not listed.
OSHA - Carcinogenicity	The product and its components are not listed.
IARC Carcinogenicity	The product and its components are not listed.
Specific Target Organ Toxicity - Single Exposure:	
STOT - Single Exposure	No Information available.
Specific Target Organ Toxicity - Repeated Exposure:	
STOT - Repeated Exposure	No Information available.

Name	LD50 Oral	LD50 Dermal	LD50 Inhalation
1,3,6,8-Pyrenetetrasulfonic acid, sodium salt 1,3,6,8-Pyrenetetrasulfonic acid, tetrasodium salt hydrate Tetrasodium pyrene-1,3,6,8-tetrasulphonate			
etidronic acid			
nitrilotrimethylenetris(phosphonic acid)			
phosphoric acid ... %, orthophosphoric acid ...%			
(2R,3R)-2,3-dimethylbutanedioic acid 2-Butenedioic acid (2Z)-, homopolymer 2-Butenedioic acid (2Z)-, homopolymer 607-861-7 ACIDO POLIMALEICO Hydrolyzed Polymaleic Anhydride POLY(MALEIC ACID) Poly(maleic acid) Polymaleic acid poly(maleic acid) polymaleic acid			

maleic acid			
benzotriazole	675.00mg/kg Rat	>2000.00mg/kg Rabbit	
propan-2-ol isopropyl alcohol isopropanol	5480.00mg/kg Rat	13000.00mg/kg Rabbit	
potassium hydroxide	284.00mg/kg Rat		

SECTION 12: Ecological Information

Eco toxicity No Information available
No Information available

Acute Toxicity - Fish LC50 96 Hours >4200 ppm Onchorhynchus mykiss (Rainbow Trout)

Acute Toxicity - Aquatic Invertebrates LC50 48 Hours >4500 ppm Daphnia magna

Acute Toxicity - Aquatic Plants EC50 72 Hours >1900 ppm

Degradability No information available.

Bio accumulative Potential No Information available.

Mobility No Information available.

Results of PBT and vPvB Assessment The product does not contain any PBT or vPvB Substances.

Other Adverse Effects None known.

Name	Acute Toxicity (Fish)	Acute Toxicity (Aquatic Invertebrates)	Acute Toxicity (Aquatic Plants)
benzotriazole	LC50 96 Hours 21.40mg/l Onchorhynchus mykiss (Rainbow Trout)		

SECTION 13: Disposal Considerations

Waste Management Observe all local, national and international regulations.

Disposal Methods No specific disposal method required.

SECTION 14: Transport Information

UN No. (DOT/TDG) Not applicable.

UN No. (IMDG) Not applicable.

UN No. (ICAO) Not applicable.

DOR Proper Shipping Name Not applicable.

TDG Proper Shipping Name Not applicable.

DOT Hazard Class	Not applicable.
DOT Hazard Label	Not applicable.
TDG Class	Not applicable.
TDG Label(s)	Not applicable.
IMDG Class	Not applicable.
ICAO Class	Not applicable.
Transport Labels	
DOT Pack Group	Not applicable.
IMDG Pack Group	Not applicable.
Air Pack Group	Not applicable.
EMS	Not applicable.
Environmentally Hazardous Substance/Marine Pollutant	No

SECTION 15: Regulatory Information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

The Following ingredients are listed — maleic acid

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The Following ingredients are listed — phosphoric acid ... %, orthophosphoric acid ... %
maleic acid
potassium hydroxide

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

The Following ingredients are listed — maleic acid

SARA 313 Emission Reporting

The Following ingredients are listed — maleic acid
propan-2-ol isopropyl alcohol isopropanol

CAA Accidental Release Prevention

The Following ingredients are listed — maleic acid

OSHA Highly Hazardous Chemicals

The Following ingredients are listed

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

The Following ingredients are listed

California Air Toxics "Hot Spots" (A-I)

The Following ingredients are listed — phosphoric acid ... %, orthophosphoric acid ... %

California Air Toxics "Hot Spots" (A-Ii)

The Following ingredients are listed

Massachusetts "Right To Know" List

The Following ingredients are listed — phosphoric acid ... %, orthophosphoric acid ... %
maleic acid
benzotriazole
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

Rhode Island "Right To Know" List

The Following ingredients are listed — nitrilotrimethylenetris(phosphonic acid)
phosphoric acid ... %, orthophosphoric acid ... %

maleic acid
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

Minnesota "Right To Know" List

The Following ingredients are listed

nitrilotrimethylenetris(phosphonic acid)
phosphoric acid ... %, orthophosphoric acid ... %
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

New Jersey "Right To Know" List

The Following ingredients are listed

phosphonic acid
nitrilotrimethylenetris(phosphonic acid)
phosphonic acid
phosphoric acid ... %, orthophosphoric acid ... %
maleic acid
benzotriazole
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

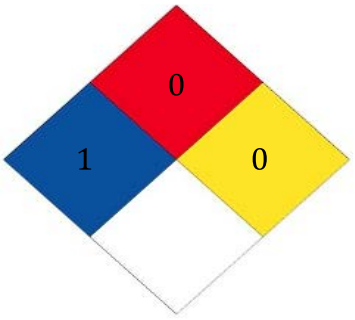
Pennsylvania "Right To Know" List

The Following ingredients are listed

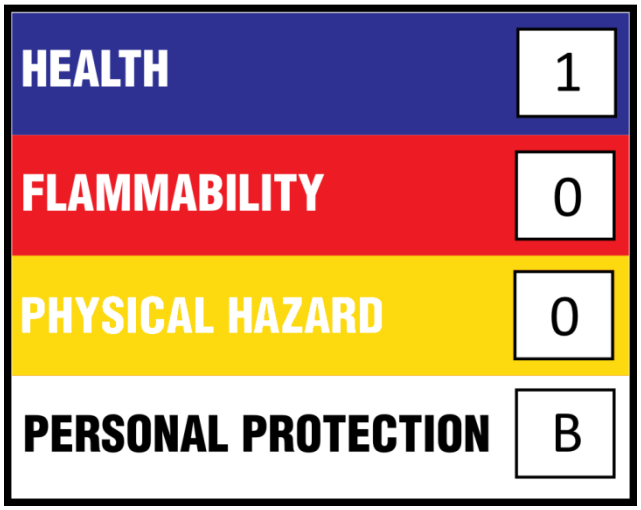
phosphonic acid
nitrilotrimethylenetris(phosphonic acid)
phosphonic acid
phosphoric acid ... %, orthophosphoric acid ... %
maleic acid
propan-2-ol isopropyl alcohol isopropanol
potassium hydroxide

SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)



Revision Comments	
Revision Date	**5/6/2015**
Revision	**1**

Disclaimer

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