Material Safety Data Sheet

Harris' Alum Hematoxylin, Mercury Free

Section 1. Product and Company Identification

Product name : Harris' Alum Hematoxylin, Mercury Free

Product code : 638A

Synonym : None.

Material uses : Other non-specified industry: Laboratory Reagent

Manufacturer : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM

Validation date : **7/25/2007.**

Print date : 7/25/2007.

In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Section 2. Hazards Identification

Physical state : Liquid.

Odor : Odor (Slight.)

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : WARNING!

COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY CAUSE EYE AND SKIN IRRITATION.
BIRTH DEFECT HAZARD.
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA

MAY BE HARMFUL IF INHALED.

Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid exposure during pregnancy.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Moderately irritating to eyes.

Skin : Harmful in contact with skin. Moderately irritating to the skin.

Inhalation : Irritating to respiratory system. May be harmful if inhaled.

Ingestion : Harmful if swallowed.

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : Contains material which can cause birth defects.

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Section 2. Hazards Identification

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

Section 3. Composition/Information on Ingredients

United States

Name	CAS number	% by Weight
Hematoxylin	517-28-2	<1
Ethanol	64-17-5	4.76
Methanol	67-56-1	0.24
Aluminum Ammonium Sulfate, Dodecahydrate	7784-26-1	4 - 5
Benzoic Acid	65-85-0	<1
Sodium Iodate	7681-55-2	<1
Water	7732-18-5	>87

Section 4. First Aid Measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin contact : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire Fighting Measures

Flammability of the product : Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Products of combustion : These products are carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2 etc.), sulfur oxides (SO_2, SO_3 etc.). Some metallic oxides.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Not available.

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Section 5. Fire Fighting Measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on explosion hazards : Vapors can travel to a source of ignition and flashback.

Section 6. Accidental Release Measures

Personal precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and Storage

Handling : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.

Storage : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
United States	
Ethanol	**ACGIH TLV (United States, 1/2005). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens.** TWA: 1880 mg/m^3 8 hour/hours. Form: All forms TWA: 1000 ppm 8 hour/hours. Form: All forms **NIOSH REL (United States, 12/2001).** TWA: 1900 mg/m^3 10 hour/hours. Form: All forms TWA: 1000 ppm 10 hour/hours. Form: All forms **OSHA PEL (United States, 8/1997).** TWA: 1900 mg/m^3 8 hour/hours. Form: All forms TWA: 1000 ppm 8 hour/hours. Form: All forms **OSHA PEL 1989 (United States, 3/1989).** TWA: 1900 mg/m^3 8 hour/hours. Form: All forms TWA: 1000 ppm 8 hour/hours. Form: All forms

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

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Section 8. Exposure Controls/Personal Protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: splash goggles

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: lab coat and gloves

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Vapor respirator or self-contained breathing apparatus (SCBA).

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and Chemical Properties

Physical state : Liquid.

Flash point : Closed cup: 62.222°C (144°F).

Auto-ignition temperature : The lowest known value is 398.85°C (749.9°F) (Ethanol).

Color : Purple.

Odor : Odor (Slight.)

Boiling/condensation point : The lowest known value is 78.35°C (173°F) (Ethanol). Weighted average: 98.79°C (209.8°F)

Melting/freezing point : May start to solidify at -0.1°C (31.8°F) based on data for: Water. Weighted average: -5.95°C (21.3°F)

Relative density : The only known value is 0.79 (Water = 1) (Ethanol).

Vapor density : The highest known value is 1.6 (Air = 1) (Ethanol).

Evaporation rate : The highest known value is 1.7 (Ethanol) Weighted average: 0.43compared with(n-Butyl Acetate =1)

Section 10. Stability and Reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive or incompatible with the following materials: reducing materials and acids.

Hazardous polymerization : Will not occur.

Conditions of reactivity : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
Vapors can travel to a source of ignition and flashback.

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Section 11. Toxicological Information

Toxicity data

United States

Product/ingredient name	Test	Result	Route	Species
Ethanol	LD50	7060 mg/kg	Oral	Rat
	LD50	6300 mg/kg	Oral	Rabbit
	LD50	3450 mg/kg	Oral	Mouse
	LDLo	1400 mg/kg	Oral	human
	LDLo	5500 mg/kg	Oral	Dog

Chronic effects on humans : **CARCINOGENIC EFFECTS** Classified A4 (Not classifiable for humans or animals.) by ACGIH [Ethanol].
Contains material which causes damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Other toxic effects on humans : Hazardous in case of skin contact (permeator), of eye contact (irritant), of ingestion, of inhalation.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : Contains material which can cause birth defects.

Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : Irritating to respiratory system.

Eyes : Moderately irritating to eyes.

Skin : Moderately irritating to the skin.

Section 12. Ecological Information

Ecotoxicity data

United States

Product/ingredient name	Species	Period	Result
Ethanol	Daphnia magna (EC50)	48 hour/hours	2 mg/l
	Daphnia magna (EC50)	48 hour/hours	9.3 mg/l
	Daphnia magna (EC50)	48 hour/hours	>100 mg/l
	Daphnia magna (LC50)	96 hour/hours	>100 mg/l
	Pimephales promelas (LC50)	96 hour/hours	>100 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	13000 mg/l

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are carbon oxides (CO, CO_2) and water, nitrogen oxides (NO, NO_2 etc.), sulfur oxides (SO_2, SO_3 etc.). Some metallic oxides.

Toxicity of the products of biodegradation : The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

RCRA classification : **Code:** (I)

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Section 13. Disposal Considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-		-

PG* : Packing group

Section 15. Regulatory Information

United States

HCS Classification : Combustible liquid
Irritating material
Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ethanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Benzoic Acid

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : Pennsylvania RTK: Ethanol: (generic environmental hazard); Methanol: (environmental hazard, generic environmental hazard); Benzoic Acid : (environmental hazard, generic environmental hazard)
Massachusetts RTK: Ethanol; Methanol; Benzoic Acid
New Jersey: Harris' Alum Hematoxylin, Mercury Free

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-2B: Material causing other toxic effects (Toxic).

CEPA DSL/CEPA NDSL : CEPA DSL: Ethanol; Aluminum Ammonium Sulfate, Dodecahydrate; Water

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Section 15. Regulatory Information

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

Risk phrases : This product is not classified according to EU legislation.

International regulations

International lists : Australia (NICNAS): Hematoxylin ; Ethanol; Methanol; Aluminum Ammonium Sulfate, Dodecahydrate; Benzoic Acid ; Sodium Iodate ; Water

China: Hematoxylin ; Ethanol; Methanol; Aluminum Ammonium Sulfate, Dodecahydrate; Benzoic Acid ; Sodium Iodate

Germany water class: Ethanol; Methanol; Benzoic Acid

Japan (METI): Hematoxylin ; Ethanol; Methanol; Benzoic Acid ; Sodium Iodate ; Water

Korea (TCCL): Hematoxylin ; Ethanol; Methanol; Benzoic Acid ; Sodium Iodate ; Water

Philippines (RA6969): Hematoxylin ; Ethanol; Methanol; Aluminum Ammonium Sulfate, Dodecahydrate; Benzoic Acid ; Sodium Iodate ; Water

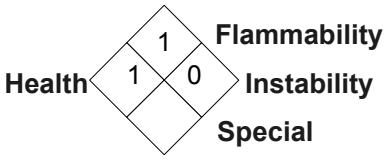
Section 16. Other Information

Label requirements : WARNING!

COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY CAUSE EYE AND SKIN IRRITATION.
BIRTH DEFECT HAZARD.
CONTAINS MATERIAL WHICH CAN CAUSE BIRTH DEFECT.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA

MAY BE HARMFUL IF INHALED.

National Fire Protection Association (U.S.A.) :



Notice to reader

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