



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Harris' Alum Hematoxylin, Mercury Free	Product Code	638A
Manufacturer	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	Effective Date	8/19/2004
		Print Date	9/7/2004

For More Information Call

856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call

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

Synonym None.

Material Uses Laboratory Reagent

Chemical Family Dye Solution

Section 2. Composition and Information on Ingredients

Component	CAS #	% 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 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview DANGER !
COMBUSTIBLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FIRE.
MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
MAY CAUSE EYE IRRITATION.
POSSIBLE BIRTH DEFECT HAZARD.
CONTAINS MATERIAL WHICH MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes May be hazardous in case of eye contact (irritant).

Skin May be hazardous in case of skin contact (permeator).

Inhalation May be hazardous in case of inhalation.

Ingestion May be hazardous in case of ingestion.

Continued on Next Page

Potential Chronic Health Effects

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

Additional information See Toxicological Information (section 11)

**Medical Conditions
Aggravated by
Overexposure:**

Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4. First Aid Measures

Eye Contact

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

**Flammability of the
Product**

Combustible.

**Auto-ignition
Temperature**

The lowest known value is 362.78°C (685°F) (ETHANOL).

Flash Points

Closed cup: 62.222°C (144°F).

Flammable Limits

The greatest known range is LOWER: 3.3% UPPER: 19% (ETHANOL)

Products of Combustion

These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...), sulfur oxides (SO₂, SO₃...). Some metallic oxides.

**Fire Hazards in Presence
of Various Substances**

Flammable in presence of open flames, sparks and static discharge, of shocks, of heat. Slightly flammable to flammable in presence of oxidizing materials.

Because of the large amount of water contained in the product, the product might be combustible only after partial or complete evaporation.

**Explosion Hazards in
Presence of Various
Substances**

Risks of explosion of the product in presence of static discharge:
Flammable in presence of open flames, sparks and static discharge.

Risks of explosion of the product in presence of mechanical impact:
Flammable in presence of shocks.

**Fire Fighting Media
and Instructions**

SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Clothing (Fire)

Be sure to use an approved/certified respirator or equivalent.

**Special Remarks on Fire
Hazards**

Dangerous fire and explosion risk. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. (METHANOL)

**Special Remarks on
Explosion Hazards**

Not available.

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.
Spill Kit Information	The following EMD Chemicals Inc. SpillSolv (TM) absorbent is recommended for this product: SX1330 Solvent Treatment Kit

Section 7. Handling and Storage

Handling	Keep away from heat, sparks and flame. Use only with adequate ventilation. 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.
Storage	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). Store between 15 to 30°C (59 to 86°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
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Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

Hematoxylin
Ethanol

Exposure Limits

Not available.

AUVA (Austria, 1995).

Spitzenbegrenzung: 3800 mg/m³ 3 times per shift, 60 minute(s).

Spitzenbegrenzung: 2000 ML/M3 3 times per shift, 60 minute(s).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ML/M3 8 hour(s).

NOHSC (Australia, 1995).

TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

Lijst Grenswaarden (Belgium, 1998).

VL: 1907 mg/m³ 8 hour(s).

VL: 1000 ppm 8 hour(s).

SUVA (Switzerland, 1997).

MAK: 1900 mg/m³ 8 hour(s).

MAK: 1000 ML/M3 8 hour(s).

Ministry of Health (CL, 1992).

TWA: 1500 mg/m³ 8 hour(s).

TWA: 800 ppm 8 hour(s).

MAK-Werte Liste (Germany, 1998).

Spitzenbegrenzung: 1920 mg/m³ 4 times per shift, 30 minute(s).

Spitzenbegrenzung: 1000 ML/M3 4 times per shift, 30 minute(s).

TWA: 960 mg/m³ 8 hour(s).

TWA: 500 ML/M3 8 hour(s).

TRGS900 (Germany, 1999).

Spitzenbegrenzung: 7600 mg/m³

Spitzenbegrenzung: 4000 ML/M3

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ML/M3 8 hour(s).

Arbejdstilsynet (Denmark, 1996).

GV: 1900 mg/m³ 8 hour(s).

GV: 1000 ppm 8 hour(s).

Tyterveyslaitos (Finland, 1998).

STEL: 2500 mg/m³ 15 minute(s).

STEL: 1300 ppm 15 minute(s).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

INRS (France, 1999).

VLE: 9500 mg/m³ 15 minute(s).

VLE: 5000 ppm 15 minute(s).

VME: 1900 mg/m³ 8 hour(s).

VME: 1000 ppm 8 hour(s).

EH40-OES (United Kingdom (UK), 2000).

TWA: 1920 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

NAOSH (Ireland, 1999).

OEL: 1900 mg/m³ 8 hour(s).

OEL: 1000 ppm 8 hour(s).

Ministry of Labour (KR, 1997).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

Secretary of Work and Social security (MX, 1994).

CPT: 1900 mg/m³ 8 hour(s).

CPT: 1000 ppm 8 hour(s).

Nationale MAC-lijst (Netherlands, 2000).

TGG 8 uur: 1000 mg/m³ 8 hour(s).

TGG 8 uur: 500 ppm 8 hour(s).

NZ OSH (NZ, 1994).

TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

AFS (Sweden, 1996).

TGV: 1900 mg/m³

TGV: 1000 ppm

NGV: 1000 mg/m³ 8 hour(s).

NGV: 500 ppm 8 hour(s).

ACGIH TLV (United States, 2000).

TWA: 1880 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

NIOSH REL (United States, 2000).

TWA: 1900 mg/m³ 10 hour(s).

TWA: 1000 ppm 10 hour(s).

OSHA Final Rule (United States, 1989).

TWA: 1900 mg/m³ 8 hour(s).

TWA: 1000 ppm 8 hour(s).

ACGIH (United States, 1994). Skin

TWA: 262 mg/m³

STEL: 328 mg/m³

Methanol

OSHA (United States, 1989). Skin

TWA: 260 mg/m³

STEL: 325 mg/m³

ACGIH (United States, 1994). Skin

STEL: 328 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 262 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

NIOSH REL (United States, 1994). Skin

STEL: 325 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 260 mg/m³ 10 hour(s).

TWA: 200 ppm 10 hour(s).

OSHA Final Rule (United States, 1989). Skin

STEL: 325 mg/m³ 15 minute(s).

STEL: 250 ppm 15 minute(s).

TWA: 260 mg/m³ 8 hour(s).

TWA: 200 ppm 8 hour(s).

Aluminum Ammonium Sulfate,

Not available.

Dodecahydrate

Benzoic Acid

Not available.

Sodium Iodate

Not available.

Water

Not available.

Section 9. Physical and Chemical Properties

Odor Odor (Slight.)

Color Purple.

Physical State and Appearance Liquid.

Molecular Weight Not applicable.

Molecular Formula Not applicable.

pH Not available.

Boiling/Condensation Point The lowest known value is 78.333°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: -0.27°C (31.5°F)

Specific Gravity The only known value is 0.794 (Water = 1) (ETHANOL).

Vapor Pressure The highest known value is 5.9 kPa (44 mmHg) (@ 20°C) (ETHANOL).

Vapor Density The highest known value is 1.59 (Air = 1) (ETHANOL).

Volatility 99.9% (v/v). (METHANOL.)

Odor Threshold The lowest known value is 5 ppm (ETHANOL)

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

VOC 12 (%)

LogK_{ow} Not available.

Solubility Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	FLAMMABLE LIQUID AND VAPOR. (ETHANOL)
Incompatibility with Various Substances	Slightly reactive to reactive with oxidizing agents, acids.
Rem/Incompatibility	Avoid all possible sources of ignition (spark or flame). Avoid Heat Incompatible with acetic anhydride, metal hydrides, calcium oxychloride. (ETHANOL)
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Hematoxylin Ethanol Methanol Aluminum Ammonium Sulfate Benzoic Acid Sodium Iodate Water	MH7875000 KQ6300000 PC1400000 Not available. DG0875000 NN1400000 ZC0110000
Toxicity	Acute oral toxicity (LD ₅₀): 3450 mg/kg [Mouse]. (ETHANOL). Acute toxicity of the vapor (LC ₅₀): 20000 ppm 10 hour(s) [Rat]. (ETHANOL).	
Chronic Effects on Humans	DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [ETHANOL]. Contains material which may cause damage to the following organs: blood, the reproductive system, liver.	
Acute Effects on Humans	May be hazardous in case of eye contact (irritant). May be hazardous in case of skin contact (permeator). May be hazardous in case of inhalation. May be hazardous in case of ingestion.	
Synergetic Products (Toxicologically)	Not available.	
Irritancy	<u>Draize Test:</u> Not available.	
Sensitization	Not available.	
Carcinogenic Effects	This material is not known to cause cancer in animals or humans.	
Toxicity to Reproductive System	Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [ETHANOL].	
Teratogenic Effects	Not available.	
Mutagenic Effects	Not available.	

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number U154 D002

Treatment Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. ALWAYS CONTACT PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

Section 14. Transport Information

DOT Classification Not available.

TDG Classification Not available.

IMO/IMDG Classification Not available.

ICAO/IATA Classification Not available.

Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(b) inventory: Hematoxylin; SDA-3A; Aluminum Ammonium Sulfate, Dodecahydrate; Benzoic Acid ; Sodium Iodate; Water
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: SDA-3A; Benzoic Acid
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: SDA-3A: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard; Benzoic Acid : 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.

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: Hematoxylin; Ethanol; Methanol; Benzoic Acid ; Sodium Iodate; Water

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS	Hematoxylin	208-237-3	
	Ethanol	200-578-6	
	Methanol	200-659-6	
	Aluminum Ammonium Sulfate, Dodecahydrate		Not available.
	Benzoic Acid	200-618-2	
	Sodium Iodate	231-672-5	
	Water	231-791-2	

D_SCL (EEC) This product is not classified according to the EU regulations.

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

Germany water class: Ethanol

Japan (MITI): 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

China: 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

California prop. 65: No products were found.

Section 16. Other Information

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



**Changed Since Last
Revision** +

Notice to Reader

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