



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Harleco® Blueing Reagent	Product Code	65354
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	3/8/2004
		Print Date	5/3/2004

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 Solution.

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Magnesium Sulfate	10034-99-8	1
Sodium Bicarbonate	144-55-8	<0.5
Sodium Azide	26628-22-8	0.1
Water	7732-18-5	>99

Section 3. Hazards Identification

Physical State and Appearance Liquid.

Emergency Overview WARNING !
HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.
MAY CAUSE EYE AND SKIN IRRITATION.
Do not take internally.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
KIDNEYS, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

Routes of Entry 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, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation May be hazardous in case of inhalation.

Ingestion Hazardous in case of ingestion. Do not ingest.

Potential Chronic Health Effects

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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 exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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. Cover the irritated skin with an emollient. 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	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product	Non-flammable.
Auto-ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: No. Risks of explosion of the product in presence of mechanical impact: No.
Fire Fighting Media and Instructions	Not applicable.
Protective Clothing (Fire)	Not applicable.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Forms explosion sensitive compounds with some metals such as lead, silver, mercury and copper. (Sodium Azide)

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	Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. 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	No specific spill kit required for this product.

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Section 7. Handling and Storage

Handling	Avoid contact with eyes, skin and clothing. Avoid prolonged contact with eyes, skin, and clothing. Do not ingest. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep container tightly closed.

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

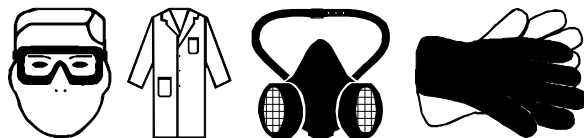
Eyes Splash goggles.

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

Magnesium Sulfate
Sodium Bicarbonate
Sodium Azide

Exposure Limits

Not available.

Not available.

ACGIH (United States, 1996).

CEIL: 0.29 mg/m³

CEIL: 0.11 ppm Form: Vapor

NIOSH REL (United States, 1994). Skin

CEIL: 0.3 mg/m³ Form: As NaN₃

CEIL: 0.1 ppm Form: As HN₃

OSHA Final Rule (United States, 1989). Skin

CEIL: 0.3 mg/m³

CEIL: 0.1 ppm

Water

Not available.

Section 9. Physical and Chemical Properties

Odor	Odorless.
Color	Colorless.
Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH	Not available.
Boiling/Condensation Point	The lowest known value is 99.9°C (211.8°F) (Water).

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Melting/Freezing Point May start to solidify at -0.1°C (31.8°F) based on data for: Water.

Specific Gravity Not available.

Vapor Pressure Not available.

Vapor Density Not available.

Odor Threshold Not available.

Evaporation Rate 0.36 (Water) compared to(n-Butyl Acetate =1)

LogK_{ow} Not available.

Solubility Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions of Instability Not available.

Incompatibility with Various Substances Reactive with acids, alkalis.

Rem/Incompatibility Avoid contact with Benzoylchloride, Potassium Hydroxide, Bromine, Carbon Disulfide, Chromyl Chloride, Dibromomalonitrile, Lead, Nitric Acid, Copper and Silver.

Hazardous Decomposition Products Not available.

Hazardous Polymerization Will not occur.

Section 11. Toxicological Information

RTECS Number:	Magnesium Sulfate	Not available.
	Sodium Bicarbonate	VZ0950000
	Sodium Azide	VY8050000
	Water	ZC0110000

Toxicity LD₅₀: Not available.
LC₅₀: Not available.

Chronic Effects on Humans Not available.

Acute Effects on Humans May be hazardous in case of eye contact (irritant). May be hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. May be hazardous in case of inhalation. Hazardous in case of ingestion.

Synergetic Products (Toxicologically) Not available.

Irritancy Draize Test: Not available.

Sensitization Not available.

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

Toxicity to Reproductive System Not available.

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 P105

Treatment Specified technology-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: Magnesium Sulfate; Sodium Bicarbonate; Sodium Azide; Water
SARA 302/304/311/312 extremely hazardous substances: Sodium Azide
SARA 302/304 emergency planning and notification: Sodium Azide
SARA 302/304/311/312 hazardous chemicals: Sodium Azide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Azide:
Immediate (Acute) Health Hazard

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

Clean Water Act (CWA) 311: No products were found.

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 D-2A: Material causing other toxic effects (VERY TOXIC).
Class D-2B: Material causing other toxic effects (TOXIC).

CEPA DSL: Sodium Bicarbonate; Sodium Azide; 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	Magnesium Sulfate	Not available.
	Sodium Bicarbonate	205-633-8
	Sodium Azide	247-852-1
	Water	231-791-2

DSCL (EEC) R21- Harmful in contact with skin.

International Lists Australia (NICNAS): Magnesium Sulfate; Sodium Bicarbonate; Sodium Azide; Water

Japan (MITI): Magnesium Sulfate; Sodium Bicarbonate; Sodium Azide; Water

Korea (TCCL): Sodium Bicarbonate; Sodium Azide; Water

Philippines (RA6969): Magnesium Sulfate; Sodium Bicarbonate; Sodium Azide; Water

China: No products were found.

State Regulations

Pennsylvania RTK: Sodium Azide: (environmental hazard, generic environmental hazard)

Massachusetts RTK: Sodium Azide

New Jersey: Harleco® Staining Blueing Reagent

California prop. 65: No products were found.

Section 16. Other Information

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



**Changed Since Last
Revision**

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Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.