

1. Product and Company Identification

Material name Magnesium Reagent
Revision date 12-14-2011
Version # 01
CAS # Mixture
Kit number 175-1L; 175-80-91; 175-12
Product use For the in vitro quantitative measurement of magnesium in serum and plasma.
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2. Hazards Identification

Physical state Liquid.
Appearance Dark blue liquid.
Emergency overview DANGER
Corrosive. Causes skin and eye burns. Causes respiratory tract irritation. May be harmful if absorbed through skin or swallowed.
OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Causes eye burns.
Skin Causes skin burns. May be harmful if absorbed through skin.
Inhalation Causes burns. Prolonged inhalation may be harmful.
Ingestion Ingestion causes burns of the upper digestive and respiratory tracts. May be harmful if swallowed.
Target organs Central nervous system. Eyes. Respiratory system. Skin. Prolonged or repeated exposure may cause liver and kidney damage.
Chronic effects May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage.
Signs and symptoms Contact with this material will cause burns to the skin, eyes and mucous membranes.
Potential environmental effects The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethanolamine	141-43-5	5 - 7
Polyethylene glycol octylphenol ether	9002-93-1	1 - 2
Sodium carbonate	497-19-8	1 - 2
Boric acid	10043-35-3	< 1

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact	Immediately rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention.
Skin contact	Wash skin thoroughly with soap and water. Get immediate medical attention.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Ingestion	Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting without advice from medical personnel. Get immediate medical attention.

Notes to physician

Provide general supportive measures and treat symptomatically.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Material may burn when exposed to sufficient heat.

Extinguishing media

Suitable extinguishing media	Extinguish with water spray, carbon dioxide, dry chemical or material appropriate for the surrounding fire.
Unsuitable extinguishing media	None known.

Protection of firefighters

Specific hazards arising from the chemical	Fire will generate toxic and irritating gases.
Protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting

equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products

Carbon oxides.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Do not allow to enter drains, sewers or watercourses.

Methods for containment

Absorb spillage with non-combustible, absorbent material.

Methods for cleaning up

Absorb spill with vermiculite or other inert material. Dispose of waste in accordance with all applicable federal, state, local and provincial environmental regulations, per Section 13.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Avoid contact with skin and eyes. Wash thoroughly after handling. In case of insufficient ventilation, wear suitable respiratory equipment. Handle and open container with care.

Storage

Store at 2-8°C (35-46°F). Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanolamine (141-43-5)	STEL	6 ppm
	TWA	3 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanolamine (141-43-5)	PEL	6 mg/m ³
		3 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Ethanolamine (141-43-5)	STEL	15 mg/m ³
		6 ppm
	TWA	7.5 mg/m ³
		3 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Ethanolamine (141-43-5)	STEL	6 ppm
	TWA	3 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Ethanolamine (141-43-5)	STEL	6 ppm
	TWA	3 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Ethanolamine (141-43-5)	STEL	15 mg/m ³
		6 ppm
	TWA	7.5 mg/m ³
		3 ppm

Mexico. Occupational Exposure Limit Values

Components	Type	Value
Ethanolamine (141-43-5)	STEL	15 mg/m ³
		6 ppm
	TWA	8 mg/m ³
		3 ppm

Exposure guidelines	Follow standard monitoring procedures.
Engineering controls	Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.
Personal protective equipment	
Eye / face protection	Wear approved chemical safety goggles.
Skin protection	Wear lab coat or other protective garments. Remove contaminated clothing promptly.
Respiratory protection	Under normal conditions, respirator is not normally required. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Dark blue liquid.
Color	Dark blue.
Odor	Not available.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	11.2 - 11.4 @ 25 °C
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.

Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Extreme temperatures.
Incompatible materials	Avoid contact with acids.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Test Results
Ethanolamine (141-43-5)	Acute Dermal LD50 Rabbit: 1025 mg/kg Acute Oral LD50 Rat: 1715 mg/kg
Acute effects	Causes severe skin burns and eye damage.
Local effects	Irritating to respiratory system.
Sensitization	Not classified.
Chronic effects	Prolonged or repeated exposure may cause liver and kidney damage.
Carcinogenicity	Not classified.
Epidemiology	No epidemiological data is available for this product.
Mutagenicity	Not classified.
Reproductive effects	Contains a substance which may have a reproductive effect. Possible reproductive hazard.
Symptoms and target organs	Corrosive effects. Permanent eye damage including blindness could result. Burning pain and severe corrosive skin damage.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Components	Test Results
Ethanolamine (141-43-5)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 114 - 196 mg/l 96 hours
Polyethylene glycol octylphenol ether (9002-93-1)	LC50 Bluegill (Lepomis macrochirus): 2.8 - 3.2 mg/l 96 hours
Ecotoxicity	Not classified.
Environmental effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Aquatic toxicity	Not classified.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulation / Accumulation	No data available.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is completely soluble in water.

13. Disposal Considerations

Waste codes	D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel]
Disposal instructions	Contaminated instruments and surfaces should be disinfected in accordance with your employer's chemical-specific and universal/standard precautions.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1760
Proper shipping name	Corrosive liquids, n.o.s. (Ethanolamine)
Hazard class	8
Packing group	II
Labels required	8

Additional information:

Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

Basic shipping requirements:

UN number	1760
Proper shipping name	Corrosive liquid, n.o.s. (Ethanolamine)
Hazard class	8
Packing group	II
Special precautions	Read safety instructions, MSDS and emergency procedures before handling.
Additional information:	
ERG code	8L

IMDG

Basic shipping requirements:

UN number	1760
Proper shipping name	CORROSIVE LIQUID, N.O.S. (Ethanolamine)
Hazard class	8
Packing group	II
EmS No.	F-A, S-B
Special precautions	Read safety instructions, MSDS and emergency procedures before handling.

TDG

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, N.O.S. (Ethanolamine)
Hazard class	8
UN number	UN1760
Packing group	II
Marine pollutant	•
Additional information:	
Special provisions	16

15. Regulatory Information

US federal regulations	This product is hazardous according to OSHA 29 CFR 1910.1200. This mixture is a component of an in vitro diagnostic device regulated by the U.S. Food and Drug Administration.
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TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance (40 CFR 355, Appendix A)	No
Section 311/312 (40 CFR 370)	Yes
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	D2B - Other Toxic Effects-TOXIC E - Corrosive

WHMIS labeling



Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

US - California Hazardous Substances (Director's): Listed substance

Ethanolamine (CAS 141-43-5) Listed.

US - Massachusetts RTK - Substance: Listed substance

Ethanolamine (CAS 141-43-5) Listed.

US - New Jersey RTK - Substances: Listed substance

Ethanolamine (CAS 141-43-5) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Ethanolamine (CAS 141-43-5) Listed.

Mexico regulations	This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).
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16. Other Information

Recommended restrictions	Use in accordance with supplier's recommendations.
Further information	HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 3*
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 3
Flammability: 0
Instability: 0

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