



NuTralize

SDS Revision Date: Nov. 12, 2015

SAFETY DATA SHEET

This safety data sheet complies with all requirements of GHS 5^e 2013

SECTION 1: IDENTIFICATION

Product Identifier:	NuTralize
CAS Number:	Not applicable – refer to Section 3 for details on ingredients
Annex VI Index Number:	Not applicable – refer to Section 3 for details on ingredients
Product Identifier Code:	2-021
Identified Uses of Product:	Water Softener for Arterial Embalming

Details of Supplier:

H.S. ECKELS & COMPANY (CANADA) LTD.

23 ADMIRAL PLACE
GUELPH, ONTARIO
N1G 4N4
(519) 824-8020

Emergency Telephone Number (613) 996-6666 (Canutec)

SECTION 2: HAZARD IDENTIFICATION

Classification of Mixture

Clear, colourless liquid. Slightly sweet odour.

Label Elements:

Signal Words

Danger, Warning

Hazard Statements

H303: May be Harmful if Swallowed

Precautionary Statements – Prevention

P280: Wear protective gloves, protective clothing and eye or face protection.

Precautionary Statements - Response

P301+P312: IF SWALLOWED: call a POISON CENTRE or doctor if you feel unwell.

Precautionary Statements - Storage

There are no specific storage precautions for this product.

Precautionary Statements - Disposal

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P501: Review federal, provincial or state, and local government requirements prior to disposal. For large quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Hazard Symbols

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Table 3.1: Ingredients of Mixture

Chemical Name	CAS Number	EC Number	Concentration %
Ethylene Glycol	107-21-1	203-473-3	20-25

SECTION 4: FIRST-AID MEASURES

Necessary First-Aid Measures upon:

Inhalation	Remove source of contamination or move victim to fresh air. If breathing has stopped give artificial respiration, obtain medical attention.
Eye Contact	Flush eyes with lukewarm water for at least 20 minutes, holding the eye lids open. If irritation persists, obtain medical attention immediately.
Skin Contact	Avoid direct contact, remove contaminated clothing flush immediately with lukewarm water for at least 20 minutes. If irritation persists, obtain medical attention immediately.
Ingestion	Induce vomiting immediately, obtain medical attention immediately.

Most Important Effects

May be harmful if swallowed
Inhalation may cause irritation of nose and throat with headache

Most Important Symptoms

Immediate	Nausea, vomiting, dizziness, drowsiness Irregular eye movements, convulsions, coma
Delayed	Pulmonary edema Cardiac failure Kidney damage

Additional Information

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Clinical Testing	Clinical tests to determine toxicity have been performed on rat and rabbit. See table 11.1 for details. Clinical testing has been performed to determine carcinogenicity. See Section 1 for details.
Medical Monitoring	Treat symptomatically. Immediate medical attention is required.
Antidotes	No antidotes have been listed for this mixture.
Contraindications	No contraindications have been listed for this mixture.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide, alcohol foam, dry chemical, water spray.

Specific Hazards arising for Combustion of the Product

May form carbon oxides and sulphur oxides.

Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and complete personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin. Ventilate area. Eliminate ignition sources.
Protective Equipment	
Respiratory protection:	Use adequate ventilation.
Protective Gloves:	Neoprene, Butyl or Polyvinyl gloves should be worn to prevent skin contact.
Eye Protection:	Chemical safety goggles and face shield should be worn to prevent eye contact.
Other Protective equipment:	Impervious gown or apron when circumstances require
Emergency Procedures	Ventilate area using local exhaust ventilation. Eliminate ignition sources.
Environmental Precautions	This product is listed as not harmful to aquatic life. Please refer to Section 12 for complete ecological effects.

If large amounts are spilled please notify your local environmental agency.

Methods and Materials for:

Containment	Absorb spill with vermiculite or dry earth. Wash area with plenty of water.
Clean Up	Review federal, provincial or state, and local government requirements prior to disposal. For large quantities, if recycling or reclaiming is not

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possible, use a commercial waste disposal service. Please refer to Section 13 for complete disposal procedures.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Specific Avoid contact with eyes, skin and clothing. Avoid breathing vapours. Wash thoroughly with soap and water after handling. Please refer to Section 6 for details on appropriate PPE.

General Hygiene Considerations Eating, drinking, smoking and applying cosmetics in work areas is prohibited. Remove all contaminated clothing and PPE before entering eating areas.

Precautions for Safe Storage

Store in a cool, dry, ventilated area. Keep away from heat, sparks and flames. Do not store below 35°F (1°C) or above 105°F (40°C).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Table 8.1: Exposure Limits

Chemical Name	TLV-C (ACGIH)	TLV-TWA (OSHA)
Magnesium Sulfate Heptahydrate	Not Available	Not Available
Ethylene Glycol	39.4ppm	50ppm

Exposure Controls

Keep container tightly closed. Do not handle until all safety precautions have been read and understood. Ensure all personnel wear appropriate PPE at all times when handling this product. Contaminated work clothing should not be allowed out of the workplace.

Engineered Protection Measures

Use local exhaust ventilators to control airborne vapours.

Individual Protection Measures

General hygiene measures and appropriate PPE should be used in conjunction with the afore mentioned engineered measures of protection. Also see Section 5 for additional protection measures in case of fire.

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Eye/Face Protection	Chemical safety goggles should be worn to prevent eye contact.
Skin Protection	Neoprene, butyl or polyvinyl gloves should be worn to prevent prolonged or repeated skin contact.
Respiratory Protection	Adequate ventilation of work area is required.
Thermal Hazards	This mixture may pose an inhalation hazard when heated.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Physical and Chemical Properties of Mixture

Appearance	Clear, colourless liquid
Odour	Slightly sweet odour
Odour Threshold	Not Available
pH	Not Available
Melting/Freezing Point	Not Available
Boiling Point and Range	197°C
Flash Point	116°C
Evaporation Rate(BuAe=1)	0.01
Flammability (Solid, Gas)	Not Available
Upper Explosive Limit	Not Available
Lower Explosive Limit	Not Available
Vapour Pressure	8mmHg
Vapour Density (air=1)	2.1
Relative Density	Not Available
Solubility	100%
Partition Coefficient: n-octanol/water	Not Available
Auto-Ignition Temp	Not Available
Decomposition Temp	Not Available
Viscosity	Not Available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Not normally reactive
Chemical Stability	Stable
Possibility of Hazardous Reactions	Hazardous polymerization does not occur.
Conditions to Avoid	Strong Oxidizers.
Incompatibility Materials	Caustics and Strong oxidizing agents. High Temperatures.
Hazardous Decomposition Products	Carbon dioxide, carbon monoxide, SO _x .

SECTION 11 : TOXICOLOGICAL INFORMATION

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Toxicological Data of Ingredients

Acute Toxicity	This substance is classified as a Possibly Harmful Material – May be Harmful if Swallowed according to GHS Regulation, Hazard Category 5.
Skin Corrosion/Irritation	Not classified as a Skin Irritant
Serious Eye Damage/Irritation	Not classified as an Eye Irritant
Respiratory or Skin Sensitization	Not classified as a Skin Sensitizer
Germ Cell Mutagenicity	Not classified as a germ cell mutagenic hazard.
Carcinogenicity	Not classified as a Carcinogen
Reproductive Toxicity	Not classified as a reproductive hazard.
STOT – Single Exposure	Not classified as a hazard for target organ toxicity in single exposure.
STOT – Repeated Exposure	Not classified as a hazard for target organ toxicity in repeated exposure.
Aspiration Hazard	Not classified as an aspiration hazard.
Routes of Exposure	Inhalation, Ingestion
Effects of Acute Exposure via:	
Inhalation	Irritation of upper respiratory tract, headache if substance is heated.
Eye Contact	No adverse effects to eye expected.
Skin Contact	No adverse effects to skin expected.
Ingestion	Nausea, vomiting, dizziness, drowsiness Irregular eye movements, convulsions, coma. Cardiac failure and Pulmonary edema may develop. Ingestion of large amounts can cause severe kidney damage.
Chronic effects	No chronic effects are expected.

Table 11.1: Toxicity Data for Hazardous Ingredients

Chemical Name	LC ₅₀ (Rat.lhl)	LD ₅₀ (Rat.oral)	LD ₅₀ (Rbt.skin)
Magnesium Sulfate Heptahydrate	Not Available	Not Available	Not Available



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Ethylene Glycol	>3.95mg/L (7hrs)	4700mg/kg	10,626mg/kg
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Interactive Effects

No interactive effects are listed for this mixture.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological Properties

Acute Aquatic Toxicity	This product is classified as not toxic to aquatic life according to GHS regulations. This mixture is not considered ecologically toxic (PAN Pesticide Database).
Chronic Aquatic Toxicity	This product is classified as not toxic to aquatic life according to GHS regulations.
Persistence and Degradability	This product is considered to be readily biodegradable.
Bioaccumulative Potential	This product shows a low bioaccumulative potential.
Ethylene Glycol: 96hr LC50(fish)	>10,000 mg/L (marine water); 8050 mg/L (fresh water)
Mobility in Soil	This product is considered to have low soil mobility.
Other Adverse Effects	No other effects are expected.

SECTION 13: DISPOSAL CONSIDERATIONS

Please refer to Sections 7 and 8 for proper storage, handling and personal protective measures.

Disposal Containers and Methods

Product Disposal	Avoid disposal of this product via sewage systems. Review federal, provincial or state, and local government requirements prior to disposal. Disposal by controlled incineration or by secure land fill may be acceptable.
Container Disposal	Empty containers may contain hazardous residue. Return to supplier for reuse if possible. Never weld, cut or grind empty containers. If disposing of containers, ensure they are well rinsed with water, then disposed of at an authorised landfill. After cleaning, all existing labels should be removed.

Properties affecting Disposal Options

No specific properties affect disposal options.

Special Precautions for Incinerators or Landfills

No special precautions for incinerators or landfills are listed for this product. See Section 12 for complete ecological information.



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SECTION 14: TRANSPORT INFORMATION

Regulation	UN Number	Description	Class	Group	Symbols
TDG	N/A	Non-Dangerous Goods	N/A	N/A	N/A
DOT	N/A	Non-Dangerous Goods	N/A	N/A	N/A

SECTION 15: REGULATORY INFORMATION

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

US Federal Information:

TSCA: All listed ingredients appear on the TSCA inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): formaldehyde (100 lbs / 45.4 kg); Methanol (5000 lbs / 2270 kg).

ECPRA (SARA TITLE III):

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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CERCLA

Ethylene Glycol CAS-No. 107-21-1, RQ: 5,000 lbs

Sections 311 and 312, 40 CFR 370 Hazard Classes: Acute Health Hazard, Chronic Health Hazard. See section 302 SARA Title III and 40 CFR 355 Appendix A & B for additional information regarding threshold quantities for the reporting of hazardous chemicals.

Section 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: Ethylene Glycol.

US State Right to Know Laws:

California Prop 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other U.S. State "Right to Know" Lists

The following chemicals are specifically listed by individual States: Ethylene glycol (MA, NJ, PA)

SECTION 16: OTHER INFORMATION

The OSHA Hazard Communication Standard (HCS) is now aligned with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Legend of Abbreviations

GHS – Globally Harmonized System of Classification and Labelling of Chemicals

SDS – Safety Data Sheet

OECD – The Organisation for Economic Co-operation and Development

CAS – Chemical Abstract Service

EC – European Commission

TLV – Threshold Limit Value

TLV-C – Threshold Limit Value – Ceiling Limit

TWA – Time Weighted Average

STEL – Short-term Exposure Limits

ACGIH – American Conference of Governmental Industrial Hygienists 1993-1994

OSHA – Occupational Safety and Health Administration

STOT – Specific Target Organ Toxicity

LC – Lethal Concentration

LD – Lethal Dose

IhI - Inhalation

Rbt - Rabbit



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UN – United Nations

TDG – Recommendations on the Transport of Dangerous Goods, published by the UN

PPE – Personal Protective Equipment

NIOSH - The National Institute for Occupational Safety and Health

IARC – International Agency for Research on Cancer

WHMIS – Workplace Hazardous Materials Information System

PAN – Pesticide Action Network

USGS – United States Geological Survey

CPR – Canadian Controlled Products Regulations

ECPRA - Emergency Planning and Community Right-to-Know Act

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

TSCA – Toxic Substances Control Act

SARA – Superfund Amendments and Reauthorization Act

DOT – U.S. Department of Transportation

HCS – Hazard Communication Standard

Prepared By:

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This Safety Data Sheet was prepared by H.S. Eckels & Company (Canada) Ltd using information provided by the Globally Harmonized System of Classification and Labelling Chemicals – Fifth Revised Edition 2013.

The information in the Safety Data Sheet is put forth to guide persons in safe conduct when exposed to NuTralize.

H.S. Eckels & Company (Canada) Ltd expressly disclaims all explicit or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein.

The data in this SDS does not apply to the exposure in any other process than those mentioned in Section 1. The data in this SDS does not apply to the exposure to any product other than NuTralize.

This Safety Data Sheet may not be changed, or altered in any way without the expressed permission of H.S. Eckels & Company (Canada) Ltd.

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