

## 1. Identification

<b>Product identifier</b>	<b>BOILERMATE 9100H Hardness Checker</b>	
<b>Other means of identification</b>	Not available.	
<b>Recommended use</b>	Boiler Water Treatment	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer</b>		
<b>Company name</b>	Miura Canada Co., Ltd.	
<b>Address</b>	4025 Sladeview Crescent, Unit 5&6 Mississauga, ON L5L 5Y1 Canada	
<b>Telephone</b>	905-607-4289 905-607-8329 (Fax) 1-800-666-2182 (Toll Free)	
<b>E-mail</b>	canada-customersupport@miuraz.com	
<b>Emergency phone number</b>	613-996-6666 (CANUTEC) Transport	
<b>Supplier</b>	See above.	

## 2. Hazard identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
<b>Environmental hazards</b>	Not classified.	
<b>WHMIS 2015 defined hazards</b>	Not classified	
<b>Label elements</b>		



<b>Signal word</b>	Warning	
<b>Hazard statement</b>	Causes serious eye irritation. Suspected of causing cancer.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection.	
<b>Response</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF exposed or concerned: Get medical attention.	
<b>Storage</b>	Store locked up.	
<b>Disposal</b>	Dispose of container in accordance with local, regional, national and international regulations.	
<b>WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)</b>	None known	
<b>WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)</b>	None known	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	
<b>Supplemental information</b>	None.	

### 3. Composition/Information on ingredients

#### Mixture

Chemical name	Common name and synonyms	CAS number	%
Diethanolamine		111-42-2	0.1 - 1 *
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate		13235-36-4	0.1 - 1 *

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

**Composition comments** \*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.  
US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

### 4. First-aid measures

<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Skin contact</b>	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical attention. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields. Keep out of reach of children.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide.
<b>Unsuitable extinguishing media</b>	Not available.
<b>Specific hazards arising from the chemical</b>	Not available.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self-contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of nitrogen. Oxides of carbon.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills in original containers for re-use. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basements or confined areas. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Do not discharge into lakes, streams, ponds or public waters.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes, skin and clothing. Wear appropriate personal protective equipment. Avoid breathing vapors or mists of this product. Use only with adequate ventilation. Avoid prolonged exposure. Observe good industrial hygiene practices. Wash thoroughly after handling. When using do not eat or drink.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

## 8. Exposure controls/Personal protection

### Occupational exposure limits

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

Components	Type	Value
Diethanolamine (CAS 111-42-2)	TWA	2 mg/m3

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

Components	Type	Value
Diethanolamine (CAS 111-42-2)	TWA	2 mg/m3

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.

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

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.

#### Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.

#### Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Diethanolamine (CAS 111-42-2)	15 minute	4 mg/m3
	8 hour	2 mg/m3

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Diethanolamine (CAS 111-42-2)	TWA	1 mg/m3	Inhalable fraction and vapor.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Diethanolamine (CAS 111-42-2)	TWA	15 mg/m3
		3 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

#### Canada - Alberta OELs: Skin designation

Diethanolamine (CAS 111-42-2) Can be absorbed through the skin.

#### Canada - British Columbia OELs: Skin designation

Diethanolamine (CAS 111-42-2) Can be absorbed through the skin.

**Canada - Manitoba OELs: Skin designation**

Diethanolamine (CAS 111-42-2)

Danger of cutaneous absorption

**Canada - Ontario OELs: Skin designation**

Diethanolamine (CAS 111-42-2)

Can be absorbed through the skin.

**Canada - Quebec OELs: Skin designation**

Diethanolamine (CAS 111-42-2)

Can be absorbed through the skin.

**Canada - Saskatchewan OELs: Skin designation**

Diethanolamine (CAS 111-42-2)

Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Diethanolamine (CAS 111-42-2)

Danger of cutaneous absorption

**Appropriate engineering controls** Ensure adequate ventilation.**Individual protection measures, such as personal protective equipment****Eye/face protection** Wear safety glasses with side shields (or goggles).**Skin protection****Hand protection** Impervious gloves. Confirm with reputable supplier first.**Other** As required by employer code.**Respiratory protection** Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).**Thermal hazards** Not applicable.**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

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**9. Physical and chemical properties**

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<b>Appearance</b>	Aqueous solution.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	dark blue / Purple
<b>Odor</b>	Slight amine
<b>Odor threshold</b>	Not available.
<b>pH</b>	10.1 (1% solution)
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	1.1
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	248.0 °F (120.0 °C)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Miscible
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

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## 10. Stability and reactivity

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<b>Reactivity</b>	Do not mix with incompatible materials.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Acids. Strong bases.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

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## 11. Toxicological information

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<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Diethanolamine (CAS 111-42-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	11.9 ml/kg, HSDB
	Rat	8328 mg/kg, RTECS
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1100 mg/kg, ECHA
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	1700 mg/kg, ECHA

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Exposure minutes** Not available.

**Erythema value** Not available.

**Oedema value** Not available.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Corneal opacity value** Not available.

**Iris lesion value** Not available.

**Conjunctival reddening value** Not available.

**Conjunctival oedema value** Not available.

**Recover days** Not available.

### Respiratory or skin sensitization

#### Canada - Alberta OELs: Irritant

Ethanol, 2,2",2""-nitriлотris- (CAS 102-71-6) Irritant

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<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	See below.
<b>ACGIH Carcinogens</b>	
Diethanolamine (CAS 111-42-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.
<b>California Proposition 65 - CRT: Listed date/Carcinogenic substance</b>	
Diethanolamine (CAS 111-42-2)	
<b>Canada - Manitoba OELs: carcinogenicity</b>	
Diethanolamine (CAS 111-42-2)	Confirmed animal carcinogen with unknown relevance to humans.
<b>Canada - Quebec OELs: Carcinogen category</b>	
Diethanolamine (CAS 111-42-2)	Detected carcinogenic effect in animals.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Diethanolamine (CAS 111-42-2)	Volume 77, Volume 101 - 2B Possibly carcinogenic to humans.
Ethanol, 2,2",2""-nitritoltris- (CAS 102-71-6)	Volume 77 - 3 Not classifiable as to carcinogenicity to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>	
Not listed.	
<b>Reproductive toxicity</b>	Not classified.
<b>Teratogenicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not classified.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

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## 12. Ecological information

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<b>Ecotoxicity</b>	See below		
<b>Ecotoxicological data</b>			
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Diethanolamine (CAS 111-42-2)			
Algae	IC50	Algae	7.8 mg/L, 72 Hours
Crustacea	EC50	Daphnia	55 mg/L, 48 Hours
<b>Aquatic</b>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	100 mg/L, 96 hours
Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4)			
<b>Aquatic</b>			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	472 - 500 mg/L, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

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## 13. Disposal considerations

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<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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## 14. Transport information

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**Transport of Dangerous Goods (TDG) Proof of Classification** Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

**U.S. Department of Transportation (DOT)**

Not regulated as dangerous goods.

**Transportation of Dangerous Goods (TDG - Canada)**

Not regulated as dangerous goods.

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## 15. Regulatory information

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**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**WHMIS 2015 Exemptions** Controlled

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Diethanolamine (CAS 111-42-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Serious eye damage or eye irritation  
Carcinogenicity

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Diethanolamine (CAS 111-42-2)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**US state regulations** See below

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

Diethanolamine (CAS 111-42-2) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Diethanolamine (CAS 111-42-2)

**US - Louisiana Spill Reporting: Listed substance**

Diethanolamine (CAS 111-42-2) Listed.

**US - Minnesota Haz Subs: Listed substance**

1,2-Propanediol (CAS 57-55-6) Listed.

Diethanolamine (CAS 111-42-2) Listed.

Ethanol, 2,2",2""-nitrilotris- (CAS 102-71-6) Listed.

**US - Texas Effects Screening Levels: Listed substance**

1,2-Propanediol (CAS 57-55-6) Listed.

Diethanolamine (CAS 111-42-2) Listed.

Ethanol, 2,2",2""-nitrilotris- (CAS 102-71-6) Listed.

Tetrasodium salt of ethylenediaminetetracetic acid tetrahydrate (CAS 13235-36-4) Listed.

**US. Massachusetts RTK - Substance List**

Diethanolamine (CAS 111-42-2)  
 Ethanol, 2,2",2""-nitrotris- (CAS 102-71-6)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2-Propanediol (CAS 57-55-6)  
 Diethanolamine (CAS 111-42-2)  
 Ethanol, 2,2",2""-nitrotris- (CAS 102-71-6)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2-Propanediol (CAS 57-55-6)  
 Diethanolamine (CAS 111-42-2)  
 Ethanol, 2,2",2""-nitrotris- (CAS 102-71-6)

**US. Rhode Island RTK**

1,2-Propanediol (CAS 57-55-6)  
 Diethanolamine (CAS 111-42-2)  
 Ethanol, 2,2",2""-nitrotris- (CAS 102-71-6)

**US. California Proposition 65**

**WARNING:** This product can expose you to chemicals including diethanolamine, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Diethanolamine (CAS 111-42-2) Listed: June 22, 2012

**Inventory status**

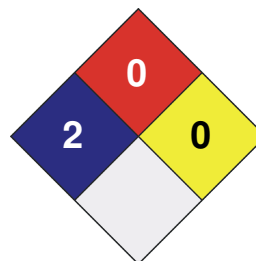
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

**16. Other information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

<b>HEALTH</b>	* 2
<b>FLAMMABILITY</b>	0
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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**Prepared by**

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

**Further information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

**Other information**

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.