

PRODUCT: TRIPLE C #235

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: Triple C #235

MATERIAL USE: Industrial Water Treatment/Corrosion Inhibitor

EMERGENCY PHONE NUMBER: (613)-996-6666

SECTION 02: HAZARDS IDENTIFICATION



SIGNAL WORD: DANGER

HAZARD CLASSIFICATION: Flammable Liquid - Category 4.
Acute Toxicity Oral - Category 4.
Acute Toxicity Dermal - Category 3.
Skin Corrosion/Irritation - Category 1B.
Serious Eye Damage/Irritation - Category 1.
Reproductive Toxicity - Category 2.

HAZARD STATEMENT: **H226:** Flammable liquid and vapour.
H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H361: Suspected of damaging fertility or the unborn child.

PRECAUTIONARY STATEMENT: **P201:** Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P240: Ground container and receiving equipment.
P241: Use explosion-proof equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist, vapours or spray.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves, protective clothing and eye protection or face protection.
P301+ P312: IF SWALLOWED: call a POISON CENTER or physician IF you feel unwell.
P301+ P330+ P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+ P361+ P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse SKIN with water.
P304+ P340: IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

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P305+ P351+ P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or physician.
P362: Take off contaminated clothing and wash before reuse.
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container to an approved waste disposal plant.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):

None.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS #	WT. %
Cyclohexylamine	108-91-8	15 - 20
Morpholine	110-91-	10 - 20
Diethylaminoethanol	100-37-8	10 - 20

Definitions:

CAS - Chemical Abstract Service registry number.

WT. % - Percent Weight.

SECTION 04: FIRST AID MEASURES

GENERAL ADVICE:	Move out of dangerous area. Perform first aid measures as indicated. Seek medical attention and show this safety data sheet to attending physician.
IF INHALED:	Move to fresh air and keep at rest in a position comfortable for breathing. If breathing difficulty occurs or persists seek medical attention. If not breathing give artificial respiration and seek immediate medical attention.
IN CASE OF SKIN CONTACT:	Immediately flush exposed skin with water for at least 15 minutes while removing contaminated clothing and/or shoes. Seek immediate medical attention.
IN CASE OF EYE CONTACT:	Immediately flush eyes with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. Check for and remove any contact lenses if easy to do. Seek immediate medical attention.
IF SWALLOWED:	Rinse mouth with water. Do not induce vomiting. Seek medical attention if symptoms develop.
THE MOST IMPORTANT SYMPTOMS AND EFFECTS, WHETHER ACUTE OR DELAYED:	No Information Available.
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:	No Information Available.

SECTION 05: FIRE FIGHTING MEASURES

FLAMABILITY:	See Section 16: Other Information.
SUITABLE EXTINGUISHING MEDIA:	Use alcohol foam, carbon dioxide, dry chemical or water spray. Use water spray to cool fire exposed containers.
UNSUITABLE EXTINGUISHING MEDIA:	No Information Available.
SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:	Combustion may produce oxides of nitrogen, carbon monoxide, carbon dioxide and other unidentified organic compounds.
PRECAUTIONS FOR FIREFIGHTERS:	No Information Available.
FIREFIGHTING INSTRUCTIONS:	No Information Available.
PROTECTION DURING FIREFIGHTING:	Wear full protective gear and full face pressure demand self-contained breathing apparatus.
OTHER INFORMATION:	No additional information available.

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SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Avoid direct contact with skin, eyes and clothing. Avoid inhalation of mist, vapor or dust. Wear appropriate personal protective equipment as outlined in Section 8: Exposure Controls/Personal Protection of this Safety Data Sheet (SDS).
ENVIRONMENTAL PRECAUTIONS:	Prevent further leakage or spillage if safe to do so. Contain spilled material and prevent run-off onto ground or into water sources or sewers. Remove or eliminate all sources of ignition.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP:	Absorb on inert material and place in containers for disposal. Dispose of spilled/collected material in accordance with all Federal, Provincial and local regulations.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	Avoid contact with skin and eyes. Avoid inhalation of mist, vapor and dust. Ensure adequate ventilation. Do not eat, drink or smoke while handling. Wear appropriate personal protective equipment as outlined in Section 8: Exposure Controls/Personal Protection of this SDS.
CONDITIONS FOR SAFE STORAGE:	Store in original container. Keep container tightly closed. Store at room temperature (10 - 32.2°C (50-90°F)) in a dry well-ventilated area.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT(S)	DATA SOURCE	EXPOSURE FORM	EXPOSURE VALUE	EXPOSURE NOTES
Cyclohexylamine	NIOSH	-	10 ppm	-
Diethylaminoethanol	ACGIH TLV	TWA	2 ppm	Upper respiratory track irritation. Potential for dermal absorption. Skin designation.
	NIOSH	TWA	10 ppm	
	OSHA PEL	TWA	10 ppm	

Definitions:

ACGIH - American Conference of Governmental Industrial Hygienists. PEL - Permissible Exposure Limit.
 NIOSH - National Institute for Occupational Safety and Health. TLV - Threshold Limit Value.
 OSHA - Occupational Safety and Health Administration. TWA - Time Weighted Average.

ENGINEERING CONTROLS:	Use explosion proof electrical equipment, non-sparking tools and ground all containers while handling this product.
EYE/FACE PROTECTION:	Chemical goggles or face shield should be worn when handling this material.
SKIN AND BODY PROTECTION:	Hand Protection: Wear chemical resistant gloves when handling. Skin and Body Protection: Wear chemical resistant apron when handling.
RESPIRATORY PROTECTION:	Wear respiratory protection while using this material.
GENERAL HYGIENE CONSIDERATIONS:	Do not wear contaminated or dirty clothing home from the work-site. Launder contaminated or dirty clothing before reuse. Follow good hygiene and safety practice. Wash hands and exposed skin before breaks and at the end of the work day. Do not eat, drink or smoke while handling this material.
OTHER/TYPE:	No additional information available.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colorless Liquid.
ODOUR:	Amine.
ODOUR THRESHOLD:	No Data Available.
pH:	No Data Available.
MELTING POINT/FREEZING POINT:	0°C.
INITIAL BOILING POINT:	No Data Available.
FLASH POINT:	62°C (144°F) Tagliabue (Tag) Closed-cup (TCC).
EVAPORATION RATE:	No Data Available.
FLAMMABILITY (SOLIDS AND GASES):	No Data Available.

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SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

LOWER FLAMMABILITY LIMIT:	No Data Available.
UPPER FLAMMABLE LIMIT:	No Data Available.
LOWER EXPLOSIVE LIMIT:	No Data Available.
UPPER EXPLOSIVE LIMIT:	No Data Available.
VAPOUR PRESSURE:	No Data Available.
VAPOUR DENSITY:	No Data Available.
RELATIVE DENSITY:	No Data Available.
SPECIFIC GRAVITY:	1.02.
SOLUBILITY IN WATER:	Complete.
AUTO IGNITION TEMPERATURE:	No Data Available.
PARTITION COEFFICIENT N-OCTANOL/WATER:	No Data Available.
DECOMPOSITION TEMPERATURE:	No Data Available.
VISCOSITY:	No Data Available.
DENSITY:	No Data Available.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	Not reactive under normal use conditions.
CHEMICAL STABILITY:	Material is stable under normal handling and storage conditions.
HAZARDOUS REACTIONS:	Hazardous polymerization will not occur under normal handling and storage.
CONDITIONS TO AVOID:	Avoid temperatures above 38°C (100°F). Avoid sources of ignition.
INCOMPATIBLE MATERIALS:	Avoid contact with oxidizers and strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS:	No decomposition products are expected under normal storage and handling conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

NUMERICAL MEASURES OF TOXICITY:

INGREDIENT(S)	EXPOSURE	SPECIES	DOSE	NOTES
Cyclohexylamine:				
Oral	LD50	Rat	432 mg/kg	
Dermal	LD50	<i>Leporidae sp.</i> (Rabbit)	275 mg/kg	
Inhalation	LC50	Rat	700 mg/L	4 hr.
Dithylamionoethanol:				
Oral	LD50	Rat	1300 mg/kg	
Dermal	LD50	Rabbit	1100 mg/kg	
Inhalation	LC50	Rat	4.6 mg/L	

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE:

INHALATION:	This material may cause respiratory irritation, dizziness, nausea and vomiting.
SKIN CONTACT:	This material may cause severe skin irritation. May be harmful if absorbed through the skin.
EYE CONTACT:	This material may cause eye irritation and injury.
INGESTION:	This material may cause irritation of the gastrointestinal system and may be harmful if swallowed.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS: No Information Available.

DELAYED AND CHRONIC EFFECTS: No Information Available.

ACUTE TOXICITY: Mixture - No Information Available.

SKIN CORROSION / IRRITATION: Mixture - No Information Available.

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SERIOUS EYE DAMAGE / EYE IRRITATION:	Mixture - No Information Available.
RESPIRATORY OR SKIN SENSITIZATION:	Mixture - No Information Available.
GERM CELL MUTAGENICITY:	Mixture - No Information Available.
CARCINOGENICITY:	Mixture - This product is considered to be a potential carcinogen by: National Toxicology Program (NTP) - No. OSHA - No. International Agency for Research on Cancer (IARC) - No.
REPRODUCTIVE TOXICITY:	Mixture - This product may cause reproductive and developmental effects.
SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:	Mixture - No Information Available.
STOT - REPEAT EXPOSURE:	Mixture - No Information Available.
ASPIRATION HAZARD:	Mixture - This product is not an aspiration hazard.
ADDITIONAL INFORMATION:	None.

SECTION 12: ECOLOGICAL INFORMATION

INGREDIENT(S)	TYPE	SPECIES	DOSE	NOTES
Cyclohexylamine:				
Fish	LC50	Freshwater	19 mg/L	14 days
Invertebrate	EC50	<i>Daphnia magna</i> (Water flea)	36.3 mg/L	48 hr
Algae	EC50	<i>Selenastrum capricornutum</i>	29.3 mg/L	72 hr
Diethylaminoethanol:				
Fish	LC50	<i>Golden Orfe</i> (Ide)	>100 mg/L	
Invertebrate	EC50	Water flea	83.6 mg/L	48 hr
Algae	EC50	Algae	30 mg/L	72 hr

PERSISTENCE AND DEGRADABILITY:	Mixture - No Information Available.
BIOACCUMULATIVE POTENTIAL:	Mixture - No Information Available.
MOBILITY IN SOIL:	Mixture - No Information Available.
OTHER ADVERSE EFFECTS:	Mixture - No Information Available.
ADDITIONAL INFORMATION:	No Information Available.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL INSTRUCTIONS:	Dispose of material in accordance with all Federal, Provincial and local regulations
CONTAMINATED PACKAGING:	Triple rinse container and offer for recycling. Dispose of container following all Federal, Provincial and local regulations.
ADDITIONAL INFORMATION:	No additional information available.

SECTION 14: TRANSPORT INFORMATION

Transportation of Dangerous Goods (TDG):	Regulated.
United States (US) Department of Transportation (DOT):	Regulated.
UNITED NATIONS (UN) NUMBER:	2735
TRANSPORT HAZARD CLASS:	8
PACKING GROUP:	III
PROPER SHIPPING NAME:	UN2735, AMINES, LIQUID, CORROSIVE, N.O.S., (CYCLOHEXYLAMINE), 8, PGIII.
SPECIAL SHIPPING INSTRUCTIONS:	None Listed.

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SECTION 15: REGULATORY INFORMATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION:

Class E, D-1B, B-2.

HAZARDOUS PRODUCT REGULATIONS (HPR) COMPLIANCE:

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.

CANADIAN INGREDIENT DISCLOSURE LIST (IDL) SUBSTANCES:

None Listed.

UNITED STATES (US) FEDERAL REGULATIONS:

Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazard Categories:

SARA 311/312 Hazard Categories: This product contains chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

- Immediate (Acute) Health Hazard: Yes.
- Delayed (Chronic) Health Hazard: Yes.
- Fire Hazard: Yes.
- Sudden Release of Pressure Hazard: No.
- Reactive Hazard: No.

SARA 302 Extremely Hazardous Substance:

Not Listed.

SARA 304 Emergency Release Notification:

Not Regulated.

SARA 313 Toxic Release Inventory (TRI) Report:

Not Regulated.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Hazardous Substance List:

Not Listed.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA):

This chemical is not a pesticide product.

Clean Air Act Regulated Substances:

None.

Clean Water Act Regulated Substances:

None.

US STATE REGULATIONS:

INGREDIENT(S)	CALIFORNIA	NEW JERSEY	MASSACHUSETTS	PENNSYLVANIA
Cyclohexylamine	X	X	X	X
Diethylaminoethanol	-	X	X	X

SECTION 16: OTHER INFORMATION

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) Hazard ID:

HEALTH	2
FLAMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	H

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *-Chronic health effect

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SECTION 16: OTHER INFORMATION

National Fire Protection Association (NFPA):



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

PREPARED BY: T. Donovan & Son (1997) Ltd.

PREPARATION DATE: May 2018

DISCLAIMER:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Regulatory requirements are subject to change and may differ between various locations. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.