



SAFETY DATA SHEET

Product: MARC 212 RETURN LINE TREATMENT

Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: **MARC 212 RETURN LINE TREATMENT**

SDS DATE: 01/08/2019

SUPPLIER: Mid-American Research Chemical Corp. ADDRESS: P. O. Box 927 Columbus, NE 68602-0927
PHONE: 402-564-7104 FAX: 402-563-1290
EMERGENCY PHONE: InfoTrac 1-800-535-5053
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RECOMMENDED USE: Boiler Water Treatment.

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION: Acute toxicity, Oral 4, Acute toxicity, Dermal 3, Acute toxicity, Inhalation 3, Skin corrosion 1B, Serious eye damage 1.



SIGNAL WORD: DANGER: Harmful if swallowed. Causes severe skin burns and serious eye damage. Harmful if inhaled. **HAZARD AND PRECAUTIONARY STATEMENTS:** Avoid breathing dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/clothing/eye/face protection. Use only outdoors or in a well-ventilated area. **IF ON SKIN (or hair):** Remove/take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. **IF INHALED:** Remove to fresh air and keep at rest in a position comfortable for breathing. **IF SWALLOWED:** rinse mouth. DO NOT INDUCE VOMITING. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Store in a well-ventilated place. Keep container tightly closed and locked up. Dispose of contents/container to an approved incineration plant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Specific percentages may be claimed as a trade secret.

COMPONENT	CAS NO.	WT. %
N,N-Diethylaminoethanol	100-37-8	5% - 15%

SECTION 4: FIRST AID MEASURES

EYES: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical assistance.

SKIN: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse or discard if they cannot be thoroughly cleaned. Get medical attention.

INGESTION: If swallowed **DO NOT INDUCE VOMITING.** Rinse mouth with water and give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical assistance.

INHALATION: Remove to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified individual is present. Get medical assistance.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically and supportively.

SECTION 5: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: None.

EXTINGUISHING MEDIA: Use carbon dioxide, water spray, dry chemical, or alcohol-resistant foam. Use water spray to keep fire-exposed containers cool. Do NOT use high volume water jet.

SPECIAL FIRE FIGHTING EQUIPMENT/

PROCEDURES: Wear a self-contained breathing apparatus MSHA/NIOSH (approved or equivalent), and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form explosive mixture with air. Vapors are heavier than air and may spread along floors. Do not flush into surface water or sanitary sewer system.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides, carbon oxides, nitrosamine. \



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HAZARDOUS COMBUSTION PRODUCTS: Nitrogen oxides, carbon oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES: Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Absorb spill with inert material, then place in a chemical waste container. Take up mechanically and collect in suitable container for disposal.

ENVIRONMENTAL PRECAUTIONS: Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

PROTECTIVE EQUIPMENT: Wear personal protection equipment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Same as EMERGENCY PROCEDURES.

SECTION 7: HANDLING AND STORAGE

GENERAL HANDLING/STORAGE: Read label before use. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapors or spray mist. Take precautionary measures against static discharges. Use product only in closed system. Keep properly labeled containers. Store in a tightly closed container, in a cool, dry, well-ventilated area.

OTHER PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN!! CAREFULLY READ ENTIRE LABEL BEFORE USE!

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	CAS NUMBER	ACGIH TWA	ACGIH STEL	ACGOJ CEILING	OSHA TWA (VACATED)
Potassium hydroxide	1310-58-3	-----	-----	2mg/m3	-----

EXPOSURE LIMITS: REGULATOR TEST ALLOWANCE
ACGIH TWA 2 ppm

ENGINEERING CONTROLS/VENTILATION: Use adequate ventilation to keep airborne concentrations low.

RESPIRATORY PROTECTION: N/A

EYES AND FACE PROTECTION: Wear tightly fitting safety goggles.

SKIN PROTECTION/PROTECTIVE GLOVES: Wear appropriate solvent-resistant gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear protective clothing.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practices. Wash hands, face and exposed skin thoroughly after handling, before breaks, and at the end of the workday. When using this product, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE-PHYSICAL STATE:	Liquid.
COLOR:	Colorless.
ODOR:	Amine-like
ODOR THRESHOLD:	Not available.
DECOMPOSITION TEMPERATURE:	No data available.
pH:	11
MELTING/FREEZING POINT:	25°F
BOILING POINT/RANGE:	212°F
DECOMPOSITION TEMPERATURE:	No data available.
FLASH POINT/METHOD USED:	N/D
AUTO-IGNITION TEMPERATURE:	N/D
EXPLOSIVE CHARACTERISTICS	



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LOWER (LEL): N/D
UPPER (UEL): N/D
VAPOR PRESSURE (mmHg): 2 hPa at 22.4°C.
DENSITY:
VAPOR DENSITY (AIR = 1): 4
RELATIVE DENSITY/SPECIFIC GRAVITY (H₂O = 1): 1.01
SOLUBILITY IN WATER: Soluble
PARTITION COEFFICIENT (N-OCTANOL/WATER): log Pow: 0.21 at 23°C.
COMPLIMENTARY DATA
MOLECULAR WEIGHT: No data available.
EVAPORATION RATE: No data available.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable at room temperature and under normal conditions.

HAZARDOUS REACTIONS: None under normal processing.

CONDITIONS TO AVOID: Stable under normal conditions.

INCOMPATIBILITY (MATERIAL TO AVOID): No materials to be especially mentioned.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Nitrogen oxides, carbon oxides, nitrosamine.

HAZARDOUS POLYMERIZATION: N/A **CONDITIONS TO AVOID (POLYMERIZATION):** NA

SECTION 11: TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

EYES CONTACT: May cause eye irritation. May cause eye injury.

SKIN CONTACT: May cause severe skin irritation. May be harmful if absorbed through the skin.

INGESTION: May cause irritation of the digestive tract. May be harmful if swallowed.

INHALATION: Vapors may cause dizziness or suffocation. May cause nausea and possible vomiting.

NUMERICAL MEASURES OF TOXICITY:

<u>ACUTE TOXICITY:</u>	<u>TEST</u>	<u>SUBJECT</u>	<u>VALUE</u>
ORAL	LD50	Rat	1,300 mg/kg
DERMAL	LD50	Rabbit	1,100 mg/kg
INHALATION	LC50	Rat	4.6 mg/l (4 hours)

ADDITIONAL INFORMATION: RTECS: KK5075000

EYE IRRITATION: Corrosive

SKIN IRRITATION: Corrosive

SENSITIZATION: No sensitization responses were observed.

MUTAGENIC EFFECTS: Did not show mutagenic effects in animal experiments.

CARCINOGENIC EFFECTS: Did not show carcinogenic or teratogenic effects in animal experiments.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY: No observed adverse effect level : 50 – 400 mg/kg/d, Oral, two-year.

SECTION 12: ECOLOGICAL INFORMATION

<u>ECOTOXICITY:</u>	<u>TEST</u>	<u>SUBJECT</u>	<u>VALUE</u>
Fish	LD50		>100 mg/l
Aquatic invertebrates	EC50	Daphnia magna	83.6 mg/l (48 hours)



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Algae: EC50 Algae 30 mg/l (72 hours)

PERSISTENCE & DEGRADABILITY: Readily biodegradable.

BIOACCUMULATIVE POTENTIAL: Bioconcentration factor (BCF) *Cyprinus carpio* (Carp) <6.1 @ 0.2 mg/l

MOBILITY IN SOIL: Koc = 72

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Should not be released into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of according to Federal, State and Local Regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (for ground/non-bulk containers)

CONTAINER SIZES(S): BULK
PROPER SHIPPING NAME: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (CONTAINS 2-DIETHYLAMINOETHANOL)
HAZARD CLASS: 8
ID NUMBER: UN3267
PACKING GROUP: III
LABEL STATEMENT: CORROSIVE

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: CAS #100-37-8 is listed on the TSCA inventory.

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 3
Flammability = 0
Reactivity = 0
Other = -
Protection = -

REVISION DATE: 01/08/2019

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