SAFETY DATA SHEET

MC1+ RAPIDE Hydronic Heating System Protector

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 09/22/2016

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Mixture

Product name: *MC1+*™ *RAPIDE* Hydronic Heating System PROTECTOR

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Corrosion inhibitor, Scale inhibitor

1.3. Details of the supplier of the safety data sheet

Company name: ADEY Innovation LLC
PO Box 38664
Pittsburgh
PA 15238
USA

Toll free: 844 378 0442
Office: 412 406 8292

Email: info@adeyusa.com

1.4. Emergency telephone number

Emergency tel: +44 (0)1795 411545
+44 (0)7909 967607

Section 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification: Not classified.

2.2. Label elements

GHS-US labelling: No labelling applicable.

2.3. Other hazards

Other hazards not contributing to the classification: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable.

Section 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%	GHS-US Classification
Triethanolamine	(CAS No) 102-71-6	20 - 40	Not classified

BENZOTRIAZOLE	(CAS No) 95-14-7	1 - 10	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Aquatic Chronic 2, H411

For full text of hazard classes and H-statements, see section 16.

Section 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Not expected to present a significant hazard under anticipated conditions of normal use. If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms occur.

First-aid measures after skin contact: Take off contaminated clothing. Wash skin with plenty of water. Get medical attention if symptoms occur.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. If large quantities are ingested, seek medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use. In high concentrations, vapors may irritate throat and respiratory system and cause coughing.

Symptoms/injuries after skin contact: May cause slight irritation.

Symptoms/injuries after eye contact: May cause slight irritation.

Symptoms/injuries after ingestion: Ingestion is not considered a potential route of exposure. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard: This product is not flammable.

Explosion hazard: Pressurized container: May burst if heated.

Reactivity: The product is non-reactive under normal conditions of use, storage and transport. Pressurized container: May burst if heated.

5.3. Advice for fire-fighters

Precautionary measures fire: Exercise caution when fighting any chemical fire.

Firefighting instructions: Use extinguishing media appropriate for surrounding fire.

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid release to the environment.

6.1.1. For non-emergency personnel

Protective equipment: Wear suitable gloves and eye/face protection. For further information, refer to section 8: 'Exposure controls/personal protection'.

Emergency procedures: Ventilate spillage area. Stop leak if safe to do so.

6.1.2. For emergency responders

Protective equipment: Wear suitable gloves and eye/face protection. For further information, refer to section 8: 'Exposure controls/personal protection'.

Emergency procedures: Ventilate spillage area. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release into the environment.

6.3. Methods and material for containment and cleaning up

For containment: Collect spillage.

Methods for cleaning up: Take up liquid spill into absorbent material. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, as per local legislation.

Other information: Dispose of in accordance with relevant local regulations.

6.4. Reference to other sections

For further information, refer to section 8: 'Exposure controls/personal protection'.

For disposal of solid materials or residues refer to section 13: 'Disposal considerations'.

Section 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed: Pressurized container: Do not pierce or burn, even after use.

Precautions for safe handling: Ensure adequate ventilation. Wear personal protective equipment. Avoid contact

with skin and eyes. Pressurized container: Do not pierce or burn, even after use.

Hygiene measures: Always wash hands after handling the product. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Ensure adequate ventilation.

Storage conditions: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce of burn, even after use. Store in a well-ventilated place.

Storage area: Store in a well-ventilated place.

Special rules on packaging: Keep only in original container.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Triethanolamine (102-71-6)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
ACGIH	Remark (ACGIH)	Eye & skin irr

BENZOTRIAZOLE (95-14-7)
Not applicable

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Personal protective equipment: Gloves. Safety glasses.

Materials for protective clothing: Wear suitable working clothes.

Hand protection: Protective gloves.

Eye protection: Eye protection should only be necessary where liquid could be splashed or sprayed.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

Environmental exposure controls: Avoid release to the environment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: Aerosol

Color:	Pale yellow to yellow
Odor:	Mild
Odor threshold:	No data available
pH:	7.5 – 8.5
Melting point:	Not applicable
Freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Relative evaporation rate (butylacetate=1):	No data available
Flammability (solid, gas):	Not applicable
Vapor pressure:	No data available
Relative vapour density at 20 °C:	No data available
Relative density:	1.15 – 1.19
Solubility:	Miscible
Log Pow:	Low data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive limits:	No data available
Explosive properties:	Pressurized container: May burst if heated
Oxidizing properties:	Oxidizing liquids not applicable

9.2. Other information

No additional information available.

Section 10: Stability and reactivity

10.1. Reactivity

This product is non-reactive under normal conditions of use, storage and transport.
Pressurized container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Heat.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

BENZOTRIAZOLE (95-14-7)	
ATE US (oral)	500.000 mg/kg bodyweight

Skin corrosion/irritation: Not classified.
pH: 7.5 – 8.5
Serious eye damage/irritation: Not classified.
pH: 7.5 – 8.5
Respiratory or skin sensitisation: Not classified.
Germ cell mutagenicity: Not classified.
Carcinogenicity: Not classified.

Triethanolamine (102-71-6)	
IARC group	3 – Not classifiable

Reproductive toxicity: Not classified.
Specific target organ toxicity (single exposure): Not classified.
Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified.
Symptoms/injuries after inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use. In high concentrations, vapors may irritate throat and respiratory system and cause coughing.
Symptoms/injuries after skin contact: May cause slight irritation.
Symptoms/injuries after eye contact: May cause slight irritation.
Symptoms/injuries after ingestion: Ingestion is not considered a potential route of exposure. May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

Section 12: Ecological information

12.1. Toxicity

Ecology – general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Ecology – water: The product does not have any known adverse effect on the tested aquatic organisms.

12.2. Persistence and degradability

***MC1+ RAPIDE* HYDRONIC HEATING SYSTEM PROTECTOR**	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

***MC1+ RAPIDE* HYDRONIC HEATING SYSTEM PROTECTOR**	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

***MC1+ RAPIDE* HYDRONIC HEATING SYSTEM PROTECTOR**	
Ecology - soil	Miscible with water.

12.5. Other adverse effects

Other adverse effects: None known.

Effect on the global warming: No known effects from this product.

GWPmix comment: No known effects from this product.

Other information: No other effects known.

Section 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste): Disposal must be done in accordance to official regulations.

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Waste disposal recommendations: Container under pressure. Do not drill or burn even after use. Dispose in a safe manner in accordance with local/national regulations.

Section 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport documentation description:	UN1950 Aerosols (non-flammable, (each not exceeding 1 L capacity)), 2.2
UN-No.(DOT):	UN1950
Proper Shipping Name (DOT):	Aerosols non-flammable, (each not exceeding 1 L capacity)
Class (DOT):	2.2 – Class 2.2 – Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT):	2.2 – Non-flammable gas

DOT Packaging Non Bulk (49 CFR 173.xxx):	None
DOT Packaging Bulk (49 CFR 173.xxx):	None
DOT Packaging Exceptions (49 CFR 173.xxx):	306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) :	75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):	150 kg
DOT Vessel Stowage Location:	A - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other:	25 - Shade from radiant heat,87 - Stow ''separated from'' Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials
Emergency Response Guide (ERG) Number:	126
Other information:	No supplementary information available

TDG

Not applicable.

Transport by sea

UN-No. (IMDG):	1950
Proper Shipping Name (IMDG):	AEROSOLS
Class (IMDG):	2 – Gases
Limited quantities (IMDG):	SP277
MFAG-No:	126

Air Transport

UN-No. (IATA):	1950
Proper Shipping Name (IATA):	Aerosols, non-flammable
Class (IATA):	2

Section 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

***MC1+ RAPIDE* HYDRONIC HEATING SYSTEM PROTECTOR**	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available.

National regulations

***MC1+ RAPIDE* HYDRONIC HEATING SYSTEM PROTECTOR**
Classified in line with 29 CFR

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

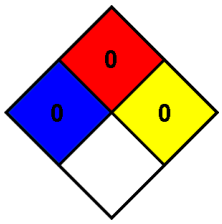
Section 16: Other information

Other information

Full text of H-statements:

H302	Harmful if swallowed
H319	Causes serious eye irritation
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard: 0 – Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard: 0 – Materials that will not burn.
NFPA reactivity: 0 – Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating
Health: 0 – Minimal Hazard – No significant risk to health.
Flammability: 0 – Minimal Hazard – Materials that will not burn.
Physical: 0 – Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection: B
B – Safety glasses, Gloves

SDS US (GHS HazCom 2012)