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|  | AXEON® Water Technologies Safety Data Sheet | | |
| | Product Specification Number: | MKTF – 224 | Rev. B |
| | Product Description: | M–100 Membrane Preservative | |
| | Submitted By / Date: | R. KINARD | 12/5/16 |
| | Reviewed By / Date: | L. HOWLEY | 12/5/16 |
| | Approved By / Date: | L. HOWLEY | 12/12/16 |

SAFETY DATA SHEET

1. Identification

Product Name: M–100 Membrane Preservative

Synonyms: N/A

Product Use: Thin Film Composite Polyamide Membrane Preservative

Manufacturer/Supplier: AXEON Water Technologies

Address: 40980 County Center Drive #100, Temecula, California, 92591, USA

General Information: 800–320–4074


**Transportation Emergency Number: CHEMTREC: 800–424–9300 (Domestic North America)
OR 703–527–3887 (International, collect calls accepted)**

2. Hazard Identification

Classification:

| Health | Environmental | Physical |
|--|---------------|----------|
| Skin Irritant – Category 2 Eye Irritant – Category 2B | | |

Pictograms:

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| Hazard Statements | Precautionary Statements |
| WARNING Causes serious eye irritation. Causes skin irritation. | Wash exposed areas thoroughly after handling. Wear protective gloves and eye/face protection. If on skin: Wash with plenty of soap and water. If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Specific treatment see Section 4 (First Aid Measures). If skin or eye irritation occurs/persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. |

3. Composition / Information on Ingredients

The specific chemical identities and exact percentages of composition have been withheld as a trade secret.

4. First Aid Measures

Eye: Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

Skin: Itching or irritation of the skin. Immediately flush the skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Use soap if available. Wash contaminated clothing before reuse.

Inhalation: For nasal irritation, remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Get immediate medical attention.

Ingestion: Do NOT induce vomiting. Give large quantities of milk and water. Never give anything by mouth to an unconscious person. Call a physician immediately.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use media appropriate to primary cause of fire. Use water to cool fire-exposed containers, structures and to protect personnel. Use water to dilute spills and to flush them away from sources of ignition.

Fire Fighting Procedures: Use water spray to cool containers exposed to fire. Minimize exposure. Do not breathe fumes. Contain run-off. A respirator that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements should be worn if conditions warrant the use of a respirator.

Unusual Fire and Explosion Hazards: None known.

Combustion Products: Will emit carbon oxides upon thermal decomposition.

6. Accidental Release Measures

Spill/Leak Clean-Up Procedures: If possible neutralize with alkaline soap.

Personal Protective Equipment: Protective clothing including chemical splash goggles, latex, nitrile, or butyl rubber full-length gloves, rubber apron made of nitrile or butyl rubber and rubber overshoes must be worn during spill clean-ups and deactivation of material. If this material comes into contact with the skin during clean-up operations, immediately remove all contaminated clothing and wash exposed skin with soap and water. See section 4 (First Aid Measures) for further information.

Land Spill: Wearing recommended protective clothing and equipment, scoop up the spilled material. Avoid dusting. Place waste in approved containers for disposal. Dispose waste according to Federal, State and Local regulations.

Water Spill: Wear protective clothing and equipment. Stop flow. Dike contaminated water and remove for disposal and/or treatment. Notify proper authorities and all downstream users if possible. Dispose of solid waste according to Federal, State and Local regulations.

7. Handling and Storage

Handling: Do not get in eyes, on skin or on clothing. Do not breathe dust or mists. Keep container closed. Use only with adequate ventilation. Use good hygiene practices. Wash hands before eating, drinking or smoking. Remove contaminated clothing and clean before re-use.

Storage Conditions: Store in tightly closed containers in cool, dry, well-ventilated area away from incompatibles. The maximum storage temperature for this material is 55°C/131°F. The minimum storage temperature for this material is 0°C/32°F.

8. Exposure Controls / Personal Protection

Exposure Limits

None of the components have a listed PEL value.

Engineering Controls: Use local exhaust ventilation at the point of dust or mist evolution. Have safety shower and eye wash station available where exposure can occur.

Personal Protective Equipment (PPE)

Respiratory Protection: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator use. Use air purifying respirators within use limitations associated with the equipment or else use supplied air-respirators. If air-purifying respirator use is appropriate, use a respirator with organic/acid gas cartridge and dust/mist prefilters. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air supplied respirator. Warning air purifying respirators do not protect workers in oxygen deficient atmospheres.

Eye Protection: Splash goggles and/or face shield (ANSI Z87.1 or approved equivalent).

Skin Protection: Wear impervious protective clothing. Use butyl (or Teflon for limited contact) gloves, boots and coveralls. Remove gloves after use. Wash hands with soap and water.

9. Physical and Chemical Properties

Appearance: White powder

Odor: None

Density: Approximately 8.5 lbs./gallon

Specific Gravity: N/A

Percentage Volatile: 1% Water – Max

Evaporation Rate: Not volatile

pH of Solution: 4.5 – 6 (2% solution)

Water Solubility: Complete

Boiling Point: N/A

Melting/Freezing Point: N/A

Vapor Pressure: N/A

Vapor Density: Not volatile

Auto-ignition Temperature: N/A

Flash point: N/A

Flammability: N/A

Flammable Limits:

LEL (Lower Explosive Limits): N/A

UEL (Upper Explosive Limits): N/A

10. Stability and Reactivity

Stability/Incompatibility: Incompatible with strong oxidizing or reducing agents. Stable under normal storage conditions; see Section 7 (Handling and Storage) for specific conditions.

Hazardous Reactions/Decomposition Products: Will emit carbon oxides upon thermal decomposition.

11. Toxicological Information

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| Acute Toxicity Information: M-100 Membrane Preservative |
| Oral (LD50) Rat – 3,654 mg/kg |
| Dermal (LD50) Rat – 2,439 mg/kg |

Signs and Symptoms of Overexposure: Eye and nasal irritation, headache, dizziness, nausea, vomiting, difficulty breathing, weakness, itching or burning of the skin.

Acute Affects: None known.

Eye Contact: May cause conjunctival irritation.

Skin Contact: May cause reddening.

Inhalation: May cause irritation.

Ingestion: May cause gastrointestinal burns.

Chronic Effects: None known.

Medical Conditions Aggravated by Exposure: None known.

12. Ecological Information

LC50 (Oncorhynchus kisutch) = 40 mg/L / 96hr

EC50 (Daphnids) = 133 mg/L / 48hr

Bioaccumulation potential has not been fully investigated. Avoid release to environment.

13. Disposal Considerations

Dispose of in accordance with Federal, State and Local regulations and permits. Refer to State and Local requirements for any additional requirements, as these may be different from Federal laws and regulations. Chemical additions, processing or otherwise altering this material may make management information presented in the Safety Data Sheet incomplete, inaccurate or otherwise inappropriate.

14. Transportation Information

Non DOT regulated ingredients.

U.S. Department of Transportation (DOT)

Proper Shipping Name: N/A
Hazard Class: Not regulated
UN/NA Number: None
Packing Group: None
Labels Required: None

International Maritime Organization (IMDG)

Proper Shipping Name: N/A
Hazard Class: Not regulated
UN/NA Number: None
Packing Group: None
Labels Required: None

15. Regulatory Information**U.S. Federal Regulations**

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): M-100 Membrane Preservative has no reportable quantity. If appropriate, immediately report to the National Response Center (800-424-8802) as required by U.S. Federal Law. Also, contact the appropriate State and Local regulatory agencies.

Toxic Substances Control Act (TSCA): All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Clean Water Act (CWA): M-100 Membrane Preservative is not a hazardous substance under the Clean Water Act. Consult Federal, State and Local regulations for specific requirements.

Clean Air Act (CAA): M-100 Membrane Preservative is not a hazardous substance under the Clean Air Act. Consult Federal, State and Local regulations for specific requirements.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 313 Notification (40CFR 372)

This Product Does Not Contain Toxic Chemicals 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.

State Regulations

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

International Regulations

Canadian Environmental Protection Act: All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System (WHMIS): None.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the Safety Data Sheet contains all the information required by the Controlled Products Regulations.

European Inventory of Existing Chemicals (EINECS): All of the components of this product are included on EINECS.

EU Classification:

EU Risk (R) and Safety (S) Phrases

R36/37/38: Irritating to eyes, respiratory system and skin.

S9: Keep container in a well-ventilated place.

S24/25: Avoid contact with skin and eyes.

S27/28: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately. Specific treatment see Section 4 (First Aid Measures).

S53: Avoid exposure. Obtain special instructions before use.

16. Other Information Revision Date: December 12, 2016

Disclaimer: This Safety Data Sheet is provided as an information resource only. This document should not be taken as a warranty for which AXEON Water Technologies assumes legal responsibility. The information contained within this Safety Data Sheet was provided by raw materials and other reliable sources. The buyer assumes all responsibility of using and handling the product in accordance with applicable Federal, State and Local regulations.

DOCUMENT REVISION HISTORY

| Revision | Revision Comments | Approval Date |
|----------|--------------------------------|---------------|
| A | New Document | 5/24/12 |
| B | Updated Content and New Layout | 12/12/16 |