



MATERIAL SAFETY DATA SHEET

AF SERIES TWIN BED DI CARTRIDGE

Product Name: AF-10-4202, AF-20-4202, AF-10-4202-BB, AF-20-4202-BB
Layered resin bed of Hydroxide Form Anion Exchange Resin and Hydrogen Form Cation Exchange Resin

Effective Date: 01/02/12

1. Company Information:

Company Address: Aries Filterworks
1 ResinTech Plaza
160 Cooper Road
West Berlin, NJ 08091 USA

Information Numbers: Phone Number: 856-768-9600
Fax Number: 856-768-9601
Email: aries@resintech.com
Website: www.ariesfilterworks.com

2. Composition/Ingredients:

Trimethylamine functionalized chlormethylated copolymer of styrene and divinylbenzene in the hydroxide form CAS# 69011-18-3 (20 - 50%)
Sulfonated copolymer of styrene and divinylbenzene in the hydrogen form. CAS# 69011-20-7 (10 - 30%)
Water CAS# 7732-18-5 (40 - 70%)

This document is prepared pursuant to the OSHA Hazard Communication Standard (29CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

3. Physical/Chemical Data:

Boiling Point: Not Applicable
Vapor Pressure (MM HG): Not Applicable
Evaporation Rate (water = 1): 1
Appearance & Odor: Cation: Amber or black beads
Anion: Light cream to white. May have amine odor
Specific Gravity: 1.2 (water = 1)
Melting Point (deg. F): Not applicable
Solubility in Water: Insoluble
Thermal: May yield oxides of carbon and nitrogen
Vapor Density: Not Applicable

Table with 2 columns: Product Hazard Rating, Scale. Rows include Toxicity = 0, Fire = 0, Reactivity = 0, Special - N/A.

4. Fire & Explosion Hazard Data

Flammable Limits: 800 ° Deg. F



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Unusual Fire & Explosion Hazards: Product is not combustible until moisture is removed, then resin starts to burn in flame at 230 C. Autoignition occurs above 500C. Possible fire.

Combustion Products: Alkylbenzenes, vinylbenzenes, naphthalene, benzaldehydes, phenol, carbon dioxide, water, organic amines, chlorine, nitrogen oxides, ammonia, methyl chloride.

Extinguishing Media: Water, CO₂, Talc, Dry Chemical

Special Fire Fighting Procedures: MSHA/NIOSH approved self-contained breathing gear.

5. Reactivity Data

Stability: Stable

Conditions to Avoid: Temperatures above 400° F

Hazardous by Products: See Section 3 above for possible combustion products.

Materials to avoid contact with: Strong oxidizing agents (i.e. nitric acid)

Hazardous Polymerization: Material does not polymerize

Storage: Store in a cool dry place

6. Health Hazards & Sara (Right to Know)

Emergency First Aid Procedures: Contact with eyes can and skins can cause irritation.

Skin Absorption: Skin absorption is unlikely due to physical properties.

Ingestion: Single dose oral LD50 has not been determined. Single dose oral toxicity is believed to be low. No hazards anticipated from ingestion incidental to industrial exposure.

Inhalation: Vapors are unlikely due to physical properties.

Systemic & Other Effects: No specific data available, however, repeated exposures are not anticipated to cause any significant adverse effects.

Carcinogenicity: Not Applicable

Sara – title 3, sections 311 & 312: All ingredients are non-hazardous

7. First Aid



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Eyes:	Irrigate immediately with water for at least 5 minutes. Mechanical irritation only.
Skin:	No adverse effects anticipated by this route of exposure.
Ingestion:	No adverse effects anticipated by this route of exposure incidental to proper industrial handling.
Inhalation:	No adverse effects anticipated by this route of exposure.

8. Control Measures

Respiratory protection:	Not required for normal uses if irritation occurs from breathing-get fresh air!
Eye protection:	Splash goggles
Ventilation:	Normal
Protective Gloves:	Not required.

9. Safe handling procedures

In Case of Spills:	Sweep up material and transfer to containers. Use caution – the floor will be slippery!
Disposal Method:	Bury resin in licensed landfill or burn in approved incinerator according to local, state, and federal regulations. For resin contaminated with hazardous material, dispose of mixture as hazardous material according to local, state and federal regulations.

10. Additional Information:

Special precautions to be taken in handling and storage:	Practice reasonable care and caution. Metal equipment should be compatible with feed, regenerant, resin form, and effluent of that process.
TSCA Considerations:	Every different salt or ionic form of an ion-exchange resin is a separate chemical. If you use an ion-exchange resin for ion-exchange purposes and then remove the by-product resin from its vessel or container prior to recovery of the original or another form of the resin or of another chemical, the by-product resin must be listed on the TSCA Inventory (unless an exemption is applicable). It is the responsibility of the customer to ensure that such isolated, recycled by-product resins are in compliance with TSCA. Failure to comply could result in substantial civil or criminal penalties being assessed by the Environmental Protection Agency.



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MSDS Status:

Canadian regulatory information added.

11. Regulatory Information: (Not meant to be all-inclusive—selected regulations represented.)

Notice:

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

12. Canadian Regulations:

WHMIS Information:

The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This product is not a "Controlled Product" under WHMIS.

Canadian TDG Information:

For guidance, the Transportation of Dangerous Good Classification for this product is: Not regulated