



MATERIAL SAFETY DATA SHEET

AF SERIES CARBON / KDF 85 CARTRIDGE

Product Name: AF-10-2210, AF-10-2211, AF-20-2212, AF-10-2212-BB, AF-20-2215-BB
Layered Cartridge of KDF 85 & Activated Granular Carbon

Activated Granular Carbon
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:

Activated carbon 100%

- PCL & TLV values not reported as TWA values unless otherwise noted.
- TWA/TLV Not Established

Cas. # 7440-44-0

Proper Shipping Name:

Not Regulated

Dot Hazard Class:

Not Applicable

Dot Identification Number:

Not Applicable

Packing Group:

Not Applicable

3. Physical/Chemical Data:

Boiling Point:

Not Applicable

Vapor Pressure (MM HG):

Not Applicable

Evaporation Rate (water = 1):

Not Applicable

Appearance & Odor:

Black Granules with no odor

Specific Gravity:

(water = 1) 1.8-2.1

Melting Point (deg. F)

Not applicable

Solubility in Water:

Insoluble

Packing Density:

4 to .7 g/cc



AF Series Carbon / KDF 85 Cartridge

Exposure Guidelines:	
OSHA PEL	ACGIH TLV
5 MG/M3 (Resp.)	10 mg/M3 (Total)
(* PELs and TLVs are 8-hour TWAs unless otherwise noted.)	

Product Hazard Rating	Scale
Toxicity = 0	0 = Negligible
Fire = 0	1 = Slight
Reactivity = 0	2 = Moderate
Special – N/A	3 = High
	4 = Extreme

4. Fire & Explosion Hazard Data

Flammable Limits:

Non-Flammable

Unusual Fire & Explosion Hazards:

Contact with strong oxidizers: such as ozone or liquid oxygen, chlorine, permanganate may cause rapid combustion.

Hazardous Combustion Products:

Irritating and/or toxic gases due to decomposition of the product may be generated during a fire.

Extinguishing Media:

Water, CO₂, Talc, Dry Chemical, Foam

Special Fire Fighting Procedures:

MSHA/NIOSH approved self-contained breathing gear operated in the positive pressure mode.

5. Reactivity Data

Stability:

Stable

Conditions to Avoid:

Moist air will reduce operating life

Hazardous by Products:

Oxides of Carbon

Materials to avoid contact with:

Acids and strong oxidizing agents

Hazardous Polymerization:

Does not occur

Storage:

Store in a cool dry place

6. Health Hazards & Sara (Right to Know)

Emergency First Aid Procedures:

Contact with eyes and skin can cause irritation. Ingestion of powder can cause irritation to GI tract. Inhalation of dust may be irritating to the respiratory tract. Ingestion and inhalation should cause no harmful effects. See a physician if irritation persists. Flush eyes with water for 15 minutes. Wash skin with soap and water.

Carcinogenicity:

Not Applicable

Sara – title 3, sections 311 & 312:

All ingredients are non-hazardous

7. Control Measures



AF Series Carbon / KDF 85 Cartridge

Respiratory protection:	Not required for normal uses if irritation occurs use NIOSH approved respirator.
Eye protection:	Splash goggles recommended for all handling
Ventilation:	Normal
Protective Gloves:	Wear gloves, which are impervious to dust

8. Safe handling procedures

In Case of Spills:	Sweep up material and transfer to containers. Clean spills, in a manner, that does not disperse dust into the air.
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9. Warning

Wet activated carbon depletes oxygen from the air and therefore dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the vessel's oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.

10. Regulatory Information

TSCA:	The ingredients of this product are on the TSCA inventory list.
OSHA:	Non-hazardous according to definitions of health hazard and physical hazard provided in the hazard communication standard (29 CFR 1910.1200)
CANADA WHMIS Classification: DSL #	Not Classified 6798

While this information and recommendations set forth herein are believed to be accurate as of the date hereof, ResinTech, Inc. makes no warranty with respect hereto and disclaims all liability from reliance thereon.

KDF 55
Effective Date: 01/02/12

1. Company Information:

Company Address:	KDF Fluid Treatment, Inc. 300 Frankfort Road Monaca, PA 15061
Information Numbers:	Phone Number: 724-774-1020 Website: www.kdfft.com



AF Series Carbon / KDF 85 Cartridge

Name: Brass Powder

Transportation Emergency: Chemtrec: 800-424-9300

Chemical Family: Metal Alloy Powder

CAS NO.: See Below

Formula: Cu/Zn

2. Ingredients

<u>Material</u>	<u>CAS NO.</u>	<u>%</u>
Copper	7440-50-8	55-99
Zinc	7440-66-6	0.5-45

3. Physical Data

Boiling Point:	Not Applicable
Vapor Pressure (760 MM HG):	Not Applicable
Evaporation Rate (water = 1):	Not Applicable
Appearance & Odor:	Brass-colored metallic particles, no odor.
Specific Gravity:	8.25 – 8.9
Melting Point (deg. F)	1710 – 1970 °F
Solubility in Water:	Insoluble

4. Fire & Explosion Hazard Data

Flammable Limits:	N/A
Unusual Fire & Explosion Hazards:	N/A
Hazardous Combustion Products:	N/A
Extinguishing Media:	N/A
Special Fire Fighting Procedures:	N/A

5. Health Hazard Data

Material (Form)		OSHA - PEL		ACGIH - TLV	
		TWA	STEL	TWA	STEL
		mg/M3	mg/M3	mg/M3	mg/M3
Copper	Dust	1.0	--	1.0	--
	Oxide Fume	0.1	--	0.2	--
Zinc	Oxide Fume	5.0	10	5.0	10



AF Series Carbon / KDF 85 Cartridge

Routes of Entry

Primary: Inhalation if the dust has become airborne.

Secondary: Ingestion

Effects of Short Term Exposure:

Copper (Fume): Excessive inhalation of copper fumes can produce an acute reaction known as "metal fume fever." Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures.

Zinc: Inhalation of high levels of zinc vapor (zinc oxide fumes) may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Overexposure may produce symptoms known as metal fume fever or "zinc shakes"; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting.

Medical Conditions Generally Aggravated By: Inhalation of dust may be an irritant to pre-existing respiratory conditions.

Emergency and First Aid Procedures: Symptoms resulting from inhalation overexposure usually disappear within 24 hours. Symptomatic treatment, such as bed rest and possibly aspirin is recommended to provide relief from fever and chills. Eye contact - flush areas with copious amounts of water. Skin contact - thoroughly wash affected areas with water. In all cases, consult physician for medical attention.

Effects of Long Term Exposure:

Copper (Fume): Chronic exposure to copper may result in anemia, but chronic poisoning does not occur.

Zinc: Chronic exposure to zinc may cause respiratory tract irritation with nasopharyngitis and laryngitis.

Carcinogenic Assessment:

NTP? No

IARC Mongraph?

No

OSHA? No

6. Reactivity Data

Stability:

Stable

Conditions to Avoid:

N/A

Incompatibility (Materials to Avoid):

Avoid contact with oxidizers

Hazardous Decomposition Products:

None

Hazardous Polymerization:

Will not occur



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7. Safe handling procedures

In Case of Spills:

Avoid dusting; metal should be contained for recycling.

Waste Disposal Method:

Contain in a dry, closed container. Material may be recycled or disposed of in accordance with Federal, State and Local Environmental Regulations. This material may be regulated under CERCLA, TSCA, SARA, and /or RCRA Regulations.

8. Control Measures

Respiratory protection:

Use NIOSH/MSHA approved type respirator against dusting conditions.

Eye protection:

Local exhaust or other ventilation that will reduce dust concentrations to less than permissible exposure limits.

Ventilation:

Normal

Protective Gloves:

Recommended to prevent skin irritation

Other Protective Equipment:

Barrier creams may help prevent skin irritation in hypersensitive individuals.

9. Special Precautions

Precautions to be taken in Handling and Storing:

Store in a cool, dry, well-ventilated space, separate from acids and alkalis.

Other Precautions:

Practice good personal hygiene when working in areas where this material is used.

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