SAFETY DATA SHEET

AF-xx-2010, AF-xx-2011, AF-xx-2012, AF-xx-2012-BB, AF-xx-2015-BB, AF-xx-2210-BB, AF-xx-2211-BB, AF-xx-2212, AF-xx-2212-BB, AF-xx-2215

(Layered Cartridge of KDF 55/85 & Coconut Shell Activated Granular Carbon)

Effective date 1 January 2021

SECTION 1: Identification	
1A: Product Names	AF-xx-2010, AF-xx-2011, AF-xx-2012, AF-xx-2012-BB, AF-xx-2015-BB, AF-xx-2210, AF-xx-2211, AF-xx-2212, AF-xx-2212-BB, AF-xx-2215-BB
1B: Common Name	Layered Cartridge of KDF 55/85 & Coconut Shell Activated Granular Carbon
1C: Intended use	Chlorine and organics removal from water
1D: Manufacturer Address	**Coconut Shell Activated Granular Carbon** ResinTech, Inc. 1801 Federal Street, Camden, NJ 08105 USA **KDF 55/85** KDF Fluid Treatment, Inc. 1500 KDF Drive Three Rivers, MI 49093
Contact Information:	**Coconut Shell Activated Granular Carbon** 856-626-1550 info@resintech.com **KDF 55/85** 269-273-3300

Revision 1.0

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

SECTION 2: Hazard Identification	
2A: OSHA Hazard classification 0 = Negligible 1 = Slight 2 = Moderate 3 = High 4 = Extreme	Not hazardous or dangerous Health - 0 (0 = Negligible) Fire - 1 (1 = Slight) Reactivity - 0 (0 = Negligible) Special – N/A
WARNING	(contains granular activated carbon) H320: Causes eye irritation (Category 2B) H335: May cause respiratory irritation (Category 3)* * chronic risk from breathing dust

SECTION 2: Hazard Identification Continued	
Precautionary Statements	P261: Avoid breathing dust/fume/gas/mist/vapors/spray P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P333+313: If skin irritation or a rash occurs: Get medical advice/attention. P337+313: If eye irritation persists get medical advice/attention. P403+233: Store in a well-ventilated place. Keep container tightly closed.
2B: Product description	Black irregular pieces with little or no odor.
2C: Precautions for use	Safety glasses and gloves recommended. Wet carbon adsorbs oxygen from air and can cause a hazard in confined spaces. Avoid breathing dust when handling dry carbon. Dust mask or respirator recommended for poorly ventilated spaces.
Potential health effects	Will cause eye irritation. Ingestion is not likely to pose a health risk. Dust may be mildly irritating.
2D: Environmental effects	Little or none.

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SECTION 3: Composition/ Information on Ingredients	
3A: Chemical name	Granular Activated carbon & KDF-55/85
3B: Ingredients: Water	CAS# 7732-18-5 (2 – 20%)
Granular Activated carbon	CAS# 7440-44-0 (80 - 98%)
KDF-55/85 Copper Zinc	 CAS# 7440-50-8 (48-52%) CAS# 7440-66-6 (48-52%)

SECTION 4: First Aid Measures	
4A: Inhalation	Dust may be mildly irritating to the upper respiratory tract.
4B: Skin	Wash with soap and water - seek medical attention if a rash develops.
4C: Eye contact	Wash immediately with water - seek attention if discomfort continues.
4D: Ingestion	Give 200-300 ml water to drink. Do not induce vomiting.

SECTION 5: Fire Fighting Measures	
5A: Flammability	NFPA Fire rating = 1
5B: Extinguishing media	Water, CO_2, foam, dry powder
5C: Fire fighting Procedures	Follow general fire fighting procedures indicated in the work place.
5D: Protective Equipment	MSHA/NIOSH approved self-contained breathing gear, full protective clothing.
5E: Combustion Products	Carbon oxides and other toxic gasses and vapors.
5F: Unusual Hazards	Product is not combustible until moisture is removed. Resin begins to burn at approximately 230° C. Auto ignition can occur above 500° C.

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SECTION 6: Accidental Release Measures	
6A: Personal Precautions	Spilled material may produce dust hazard if not handled correctly. Wear appropriate personal protective equipment: coveralls, gloves & eye protection.
6B: Incompatible Chemicals	Strong oxidants can create risk of combustion products similar to burning,
6C: Environmental Precautions	Keep out of public sewers and waterways.
6D: Containment Materials	Use plastic, paper, or metal containers.
6E: Methods of Clean-up	Contain spillages and clean up with vacuum or conventional tools and attempt to minimize dusting.
6F: Methods of Disposal	Place in a suitable container for recycling or disposal in accordance with local, state and federal regulations.

SECTION 7: Handling and Storage	
7A: Handling	Avoid prolonged skin contact. Only use in a well ventilated area and prevent the creation of dusts. If concentrations exceeds the occupational exposure limits, use suitable respiratory protection.
7B: Storage	Store in a dry place (0° to 50° C) in the original shipping container. This product is not thermally sensitive. Freezing does not damage granular carbon. Keep away from food, drink and animal feeding stuffs.
7A: TSCA considerations	Carbon should be listed on the TSCA Inventory in compliance with State and regulations.

SECTION 8: Exposure Controls/Personal Protection	
8A: OSHA exposure limits	8-hour TWA 1. Copper Powder as dust and mist 2. Zinc Powder as dustsOSHA PEL 10 mg/m³ 8-hour and ACGIH TVL: 10 mg/m³ 8-hour TWA
8B: Engineering Controls	All personal protective equipment, including respiratory equipment, used to control exposure to hazardous substances must be selected to meet the requirements of national personal protective equipment regulations.
Ventilation:	To keep below USA OSHA and EU exposure limits, use general dilution type ventilation.

Revision 1.0

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SECTION 8: Exposure Controls/Personal Protection	
8C: Personal Protection Measures	Eye Protection- Safety glasses or goggles. Respiratory Protection - Cartridge type particulate filter respirator or dust-mask conforming to USA NIOSH. Refer to Respiratory Protective Devices approved by NIOSH under 42 CFR 84 and the appropriate EU standard. Hand Protection - Wear gloves if contact is probable and skin is sensitive. Skin Protection - Long sleeve shirts if contact is probable and skin is sensitive.
Environmental Protection	Do not allow to enter drains of watercourses.

SECTION 9: Physical and Chemical Properties	
Appearance	Carbon - Irregular black granular pieces. KDF - Purplish to yellow in color
Flammability or explosive limits	Carbon - Flammable above 500° C
Odor	None
Physical State	Solid
Vapor pressure	N/A
Odor threshold	N/A
Vapor density	N/A
pH	Carbon - Near neutral (6 to 8 typical)
Relative density	Carbon - Approx 400 grams/Liter
Melting point/freezing point	Carbon - Does not melt or freeze. KDF - Copper (1083°C) Zinc (419°C)
Solubility	Carbon - Insoluble in water and most solvents KDF - Insoluble in water
Boiling point	Carbon - Does not boil KDF - Copper (2567°C) Zinc (1665°C)
Flash point	Carbon - >220° C
Evaporation rate	Carbon - Does not evaporate KDF - N/A
Partition Coefficient (n-octonol/water)	N/A
Auto-ignition temperature	Carbon - >220° C

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INNOVATIONS IN ION EXCHANGE

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SECTION 9: Physical and Chemical Properties	
Decomposition temperature	Carbon - Above 220° C
Viscosity	N/A
Volatile by Volume %	KDF - Copper (0) Zinc (0)
Molecular Weight	KDF - Copper (63.54) Zinc (65.37)

SECTION 10: Stability and Reactivity	
10A: Stability	Stable under normal conditions.
10B: Conditions to Avoid	Wet carbon adsorbs oxygen from air. Contact with strong oxidizing agents can cause rapid combustion. (Calcor) Temperatures above 100°C while in the presence of moist air.
10C: Hazardous by-products	Carbon oxides, sulfur oxides, chlorinated hydrocarbons. (Calcor) Metal fumes will be released if heated above the elements melting point.
10D: Incompatible materials	Strong oxidizing agents (such as HNO_3)
10E: Combustion Products	Does not occur

SECTION 11: Toxicological Information	
11A: Likely Routes of Exposure	Oral, skin or eye contact.
11B: Effects of exposure	Delayed - None known. Immediate (acute) - None known. Chronic - None known.
11C: Toxicity Measures	Skin Adsorption - Unlikely. Ingestion - Oral toxicity believed to be low but no LD50 has been established. Inhalation - Unknown, vapors are very unlikely due to physical properties (insoluble solid).
11D: Toxicity Symptoms	Skin Adsorption - Mild rash. Ingestion - Irritation and burning sensation of mouth and throat, nausea abdominal pain with possible diarrhea. Inhalation - Irritation of the mucous membranes, coughing, shortness of breath. Prolonged exposure may cause metallic taste.
11E: Carcinogenicity	None known

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SECTION 12: Ecological information	
12A: Eco toxicity	Not harmful to plant or animal life.
12B: Mobility	Insoluble
12C: Biodegradability	Not biodegradable.
12D: Bioaccumulation	Insignificant.
12E: Other adverse effects	Not Harmful to the environment.

SECTION 13: Disposal Considerations	
13A: General considerations	Material is non-hazardous.
13B: Disposal Containers	Most plastic and paper containers are suitable.
13C: Disposal methods	No specific method necessary.
13D: Sewage Disposal	Not recommended
13E: Precautions for incineration	May release toxic vapors when burned
13F: Precautions for landfills	Carbon used to remove hazardous materials may then become a hazardous mixture

SECTION 14: Transportation Information	
14A: Transportation Class	Not classified as a dangerous good for transport by land, sea, or air.
14B: TDG	Not regulated.
14C: IATA	Not regulated.
14D: DOT (49 CFR 172.101)	Not regulated.

SECTION 15: Regulatory Information	
15A: CERCLA	Not regulated
15B: SARA Title III	Not regulated
15C: Clean Air act	Not regulated
15D: Clean Water Act	Not regulated
15E: TSCA	Not regulated
15F: Canadian Regulations	WHMIS - Not a controlled product TDG - Not regulated
15G: Mexican Regulations	Not Dangerous

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SECTION 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that their activities comply with federal, state, and local laws.

16A: Date of Revision	1 January 2021

Revision 1.0

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