



AGC-30

ACTIVATED CARBON
D, AD, W, OR AW GRADES

RESINTECH AGC-30 is a coal based, premium grade, granular activated carbon supplied as either DRY or PRE-MOISTENED granules with a size range of 8 to 30 mesh. The pore structure is carefully controlled to facilitate the adsorption of both high and low molecular weight organic molecules. RESINTECH AGC-30 is intended for use in dechlorinating water, reducing organic impurities, and as pretreatment for reverse osmosis and ion exchange systems.

Grade	Product Name	Pre-Wetted	Acid Washed
D	RESINTECH AGC-30D	No	No
AD	RESINTECH AGC-30AD	No	Yes
W	RESINTECH AGC-30W	Yes	No
AW	RESINTECH AGC-30AW	Yes	Yes

FEATURES & BENEFITS

- REDUCED FINES AND DUST**

The pre-moistened grades are easier and safer to handle. They are virtually free of the carbon dust and fines that are responsible for the hazardous smoke and fumes created when handling dry granular activated carbon. The retained moisture also cushions the product during shipment which retards dust and fines generation and acts as a binder to minimize airborne dust during loading.

- LOW PRESSURE LOSS**

The 8x30 mesh carbon has very low pressure loss and is the ideal choice for chlorine removal applications where chlorine and/or organic removal is not essential.

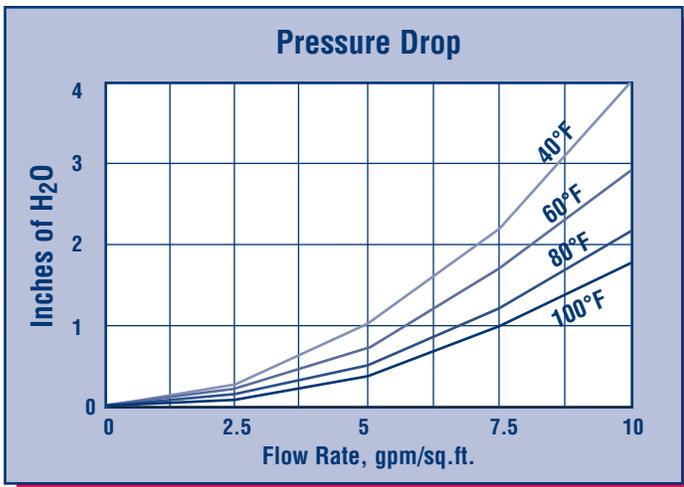
- IDEAL PORE STRUCTURE**

Well defined pore structure with high surface area for maximum organic holding capacity and rapid dechlorination rates provide chlorine-free effluents with reduced organic content at high flow rates and low pressure drops.

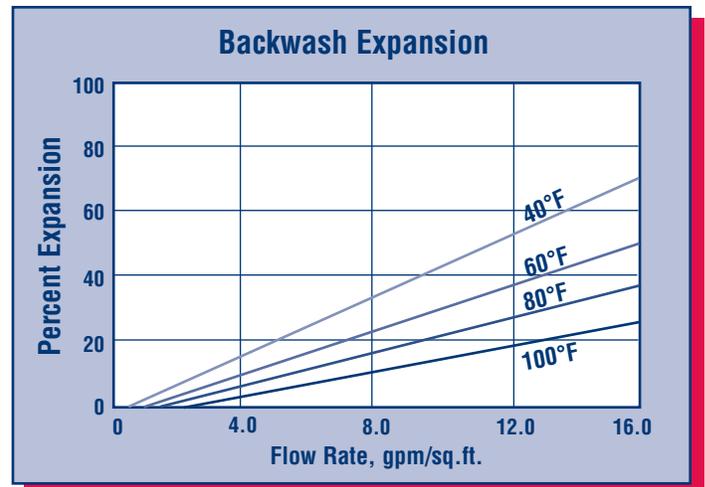
- SUPERIOR PHYSICAL STABILITY**

Very durable surface provides minimum attrition and long life. Suitable for steam regeneration.

HYDRAULIC PROPERTIES



PRESSURE DROP - The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH - The carbon bed should be backwashed at least once a week with chlorinated water to achieve a bed expansion of 15 to 20%. This process helps to keep the carbon bed sterile and removes any foreign matter and carbon fines.

RESINTECH® AGC-30

PHYSICAL PROPERTIES

Carbon Type	Coal
Screen Size	8x30 US Mesh Size
+8 mesh	15 percent max.
-30 mesh	5 percent max.
Mean Particle Size	1.4 to 1.7 mm
Uniformity Coefficient	2.1 max.
Abrasion Number	75 min.
Wet Density (as used)	38 lbs./cu.ft.
Dry Density (as shipped)	28 lbs./cu.ft.
Moisture	5 percent max.
Ash	14 percent max.
Activity Values (mg/gm)	
Iodine Number	950 min.

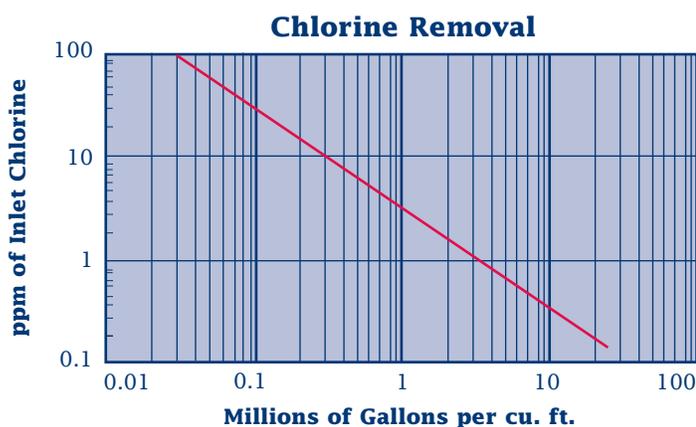
ACID WASHED SPECIFICATIONS

Acid Soluble Ash	Less than 0.5 percent
Total Ash (typical)	8 to 9 percent
pH (as shipped)	5 to 8
Acid Soluble Metallic Impurities	as mg/kg of moist carbon
Aluminum	Less than 2000
Copper	Less than 100
Moisture (as shipped)*	Typical 30 to 40 percent

*Shipping weight based on backwashed and drained density

SUGGESTED OPERATING CONDITIONS

Maximum Temperature	250°F
Minimum Bed Depth	
Chlorine Removal	24"
Organics Removal	36" or Greater
Support Bed	12" Graded Gravel or Coarse Sand
Backwash Rate	15 to 25% Bed Expansion
Flow Rate	
For Chlorine Removal	1.0 to 2.0 gpm/cu.ft.
For Organics Removal	0.5 to 1.0 gpm/cu.ft.



OPERATING CAPACITY

Chlorine Removal

RESINTECH AGC-30 activated carbon can be expected to remove a minimum of one pound of chlorine per pound of carbon. A 24" deep bed of RESINTECH AGC-30 will reduce 1ppm of inlet chlorine to below the limit of detection.

The graph shows throughput capacity for chlorine removal under the following conditions:

- 2 gpm/cu.ft. of deionized water
- 77°F
- 0.1 ppm chlorine leakage endpoint

Chlorine removal efficiency is affected by the following:

- Increasing temperature increases removal
- Increasing pH reduces removal (above pH 8.0 consult our technical department for recommendations)
- Increasing TOC usually improves removal
- High flow rate reduces removal

Organics Removal

Removal of organics by activated carbon is variable and is site specific. In general, large organic molecules are removed more completely than smaller molecules. The probable mechanism of removal is adsorption into the carbon pores. Organics with fewer than 6 carbon atoms are not well removed. Aromatic organic molecules are generally removed better than aliphatic molecules. Organic ions are generally not well removed. Polar molecules are not removed as well as non-polar molecules.

Steam Regeneration

RESINTECH AGC-30 can be regenerated with steam to remove organics and/or chlorine that has been adsorbed. The following procedure is recommended.

1. Drain the vessel
2. Inject steam at 212°F to 225°F through the underdrain and out the vent
3. Steam for a minimum of 60 minutes after reaching constant temperature
4. Drain condensate from the vessel
5. Refill vessel, then backwash and rinse

CAUTION: Make certain that the filter and ancillary equipment can withstand steam. Do not allow steam pressure to build up inside the vessel.

***CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS.** Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

Material Safety Data Sheets (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used

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