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Product Information for Water Treatment Grades: Granular Activated Alumina (GAA)

Mesh sizes available	Typical Application areas
GAA 8x20	Bed support and hold-down media
GAA 18x48	Metal ion removal
GAA 28x48	Potable water treatment: As & F
GAA 48x100	Slurry for adsorption of contaminant ions
GAA <100 mesh	Adsorbent Slurry for enhanced solids settling

PRINCIPAL USES: An effective media for use in a variety of water purification processes such as purification of processing liquids, industrial water, and waste water. Waste water streams often contain contaminant species such as fluoride, arsenate, phosphate, and various metals in ionic form. GAA is highly versatile adsorbent and provides consistent performance for removing low levels (ppm) of contaminant ions from water, including phosphate, fluoride, arsenate and selenate, and various metals in ionic form. GAA is a highly active, wide pore alumina adsorbent and has the following Selectivity Sequence for common drinking water contaminants: $\text{H}_2\text{AsO}_4^- > \text{H}_2\text{PO}_4^- > \text{HSeO}_3^- > \text{F}^- > \text{H}_2\text{SiO}_4^- > \text{HCrO}_4^- > \text{SO}_4^{2-}$

PRODUCT INFORMATION: Several important process variables which influence the performance of the GAA adsorbent include: solution pH, ionic strength, and speciation of the contaminant. We can assist in designing the correct adsorbent volume / contact time to achieve a given effluent concentration.

CHARACTERISTICS: Optimally sized GAA product, having high surface area and porosity, for adsorption processes. Typical product properties are as follows:

CHEMICAL ANALYSIS (Dry basis)

	<u>TYPICAL</u>
SiO ₂	0.02 wt%
Fe ₂ O ₃	0.02 wt%
Na ₂ O	0.3 wt%
Loss on Ignition	5.0 wt%
Al ₂ O ₃	95 wt%

PHYSICAL PROPERTIES

	<u>TYPICAL</u>	<u>TYPICAL RANGE</u>
Surface Area	340 m ² /gm	320-380 m ² /gm
Bulk Density Packed	40 lb./ft ³	38-42 lb./ft ³
Total pore volume	0.52 cc/g	0.5 – 0.55 cc/g

SCREEN SIZING

	<u>TYPICAL</u>	<u>TYPICAL RANGE</u>
Oversize (+28 mesh)	2 wt%	0-5 wt%
Undersize (-48 mesh)	2 wt%	0-5 wt%

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