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MILLERS & PROCESSORS OF BASE MINERALS

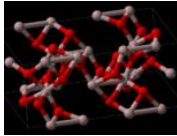


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Data Sheet



Product : Activated Alumina
Grades : 0.8 – 3.0mm
-5 +3mm

CHEMICAL ANALYSIS %

Typical:	98% Calcined Alumina granules
Absorption Capacity:	Capacity: 14gms/Litre of Activated Alumina
Contact time:	20 – 180 seconds. Depending on Fluoride levels
Flow rate:	250 liters/min – 15 000 liters per sq. meter per hour

PROPERTIES:

0.8 – 3mm

MoH Hardness: 8

Dry Bulk Density: 1.7 1700kgs/cube

Bed Depth: 800mm recommended minimum

Regeneration:

- 1) **Acidification** – Alumina HOH + 3.5% HCL → Alumina HCL + HOH Acidic alumina is formed. Rinse MINIMUM 5 mins or 8 Bed Volumes
- 2) **Ion Exchange** – Alumina HCL + NAF → Alumina HF + NACL. Fluoride ions displace chloride ions under acidic conditions.
- 3) **Regeneration** – Alumina is saturated with a dilute solution 3 – 5% sodium Hydroxide (caustic soda) alumina. HF + 2 NAOH → alumina NAOH + NAF + H₂O. Residence time 60 mins. Backwash 5 mins or 8 Bed Volumes.
- 4) **Repeat Acidification** – To restore fluoride removal capacity is immersed with dilute HCL. Alumina NAOH + 2HCL → Alumina HCL + NACL + HOH. As per step 1 and is ready for another fluoride absorption cycle.

OR:

- 5) **Acidification** – Sulphuric Acid 98% diluted to 3.5% - Soak for MINIMUM 60mins. Rinse MINIMUM 5 mins or 8 Bed Volumes
- 6) **Regeneration** – 48- 50% Caustic Soda Solution. 70mls (NAOH) per Litre/1000mls of water. Residence time 60 mins. Backwash 5 mins or 8 Bed Volumes.

FILTER BED TO BE FULLY IMMERSSED IN ABOVE SOLUTIONS

Note: Backwash plain water 20 minutes every 10 weeks depending on fluoride contamination

APPLICATION:

Extraction of Fluorides from borehole, stream and mine waters

PACKING:

Packed in 40kg bags or 1000kg bulk bags

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