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**WATERITE TECHNOLOGIES, INC.
PRODUCT SPECIFICATION SHEET
FIL-GAC-006**

**GAC/CALCITE COMBINATION INLINE FILTER
CARTRIDGE FOR POLISHING (ELIMINATION OF
ODOR AND TASTE) AND THE
REMINERALIZATION OF RO WATER**

TYPE:	2" x 10" inline cartridge
FEED:	Recommended for RO permeate or any purified, de-mineralized water.
FEED PRESSURE:	100psi maximum (6.9 bar)
TEMP. RANGE:	4.4°C to 35°C
CAPACITY:	1500L @ 0.8 gpm (3.0 lpm)
MICRON RATING:	20 micron nominal
COLOUR:	white cap and body
BODY MATERIAL:	Cartridge body: Food-grade polypropylene thermoplastic resin
CARBON:	Internal packing: spun polypropylene 50% by volume, 20/50 mesh activated coconut shell activated carbon, >1000 iodine adsorption rating, 91+ hardness, <3% ash
CALCITE:	50% by volume, CaCO ₃ (calcium carbonate), 16/40 mesh, white, specific gravity 2.7. Contains < 3% MgCO ₃
LENGTH:	250mm+-1mm, without fittings
MODEL:	Excelpure AIC-10C
END CONNECTIONS:	1/4" X 1/4" FNPT, factory dust sealed
CORPORATE MARK:	

*Excelpure*TM



SPEC FIL-GAC-006

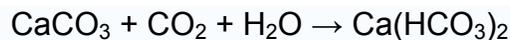
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Calcite is a naturally occurring calcium carbonate media. One of the advantages of Calcite is its self-limiting property. When properly applied, it corrects pH only enough to reach a non-corrosive equilibrium. It does not overcorrect under normal conditions. Upon contact with Calcite, acidic waters slowly dissolve the calcium carbonate to raise the pH which reduces the potential leaching of copper, lead and other metals found in typical plumbing systems.

Calcite effectively increases TDS (total dissolved solids) of RO permeate through the dissolution of calcium carbonate. TDS increase observed in lab tests as follows:

Test conditions:			
Cartridge was flushed with one storage tank volume of RO permeate (3.7 liters).			
Observations:			
	Temp (C°)	pH	TDS
Raw water	19.3	7.8	69
Pre-filter permeate	20.0	7.0	9
Post-filter permeate	20.0	7.9	69

Calcium carbonate is widely used medicinally as an inexpensive dietary calcium supplement. It is used in some soy milk products as a source of dietary calcium; one study suggests that calcium carbonate might be as bioavailable as the calcium in cow's milk. ^[1] Calcium carbonate is poorly soluble in pure water and precipitates as a fine powder. Calcium carbonate will react with water that is saturated with carbon dioxide to form the soluble calcium bicarbonate.



Depending on pH, water chemistry and service flow, the GAC/Calcite cartridge will have to be periodically replaced as the Calcite is depleted and the carbon will become exhausted.



[1] Y. Zhao, B. R. Martin and C. M. Weaver (2005). "Calcium Bioavailability of Calcium Carbonate Fortified Soymilk Is Equivalent to Cow's Milk in Young Women". *J. Nutr.* **135** (10): 2379–2382. [PMID 16177199](https://pubmed.ncbi.nlm.nih.gov/16177199/).

