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## Coconut Shell Granular Activated Carbon GAC1240CCC

**GAC1240CCC** is a non-chemically impregnated coconut shell catalytic activated carbon product. It has been surface modified during manufacture, to significantly enhance the carbon's catalytic capabilities to promote oxidation, reduction, decomposition, substitution, and elimination reactions in water treatment and other applications. More specifically, GAC1240CCC's high catalytic activity provides enhanced removal of chloramines and hydrogen sulfide from potable and process water. Our GAC1240CCC also has a high surface area that enables it to adsorb organics as well as decomposing compounds such as hydrogen sulfide and chloramines.

### Specifications

Material	coconut based activated carbon
Mesh Size:	12 x 40
Greater than 12 mesh	5% maximum
Less than 40 mesh	4% maximum
Iodine Number (mg/g)	1000 minimum
CTC Activity	50 % minimum
Catalytic Activity	Min. 20 °c 6 minute rise to 50 C reactivity
Moisture (as packed)	5% maximum

### Typical Properties

Apparent Density	490 kg/m <sup>3</sup>
Surface area (BET)	1060 m <sup>2</sup> /g
Bed density, backwashed drained	420 kg/ m <sup>3</sup>
pH	10
Mean Particle Diameter	1.07 mm
Uniformity Coefficient	1.82
Effective Size	0.61 mm

### Packaging

31.5 pounds = 1 cubic foot (available by the pound in 27.5 lb, 55 lb. or 1100 lb. super sacks)  
All of the above test methods are performed by ASTM protocol for granular activated carbon.

*(SEE NEXT PAGE FOR OUR CLAIM THAT MC1240CC GIVES SUPERIOR PERFORMANCE COMPARED TO THE LEADING COMPETITOR'S PRODUCT)*

Two catalytic carbon samples, GAC1240CCC and a leading competitor's product, were submitted to an independent activated carbon testing laboratory for the determination of monochloramine reduction and hydrogen sulfide capacity, in water, for each of the catalytic carbons.

The monochloramine tests were performed using 400 ml of a prepared working solution containing 4.1 ppm of monochloramine. 200 grams of the pulverized carbon sample was added to the stirred solution. 10ml aliquots were withdrawn from the carbon/water suspension after 1,2,3,5, and 10 minutes of carbon contact. After each aliquot was withdrawn, it was immediately filtered through a 0.45 micron filter to remove the catalytic carbon. The filtrates were then analyzed for monochloramine and the results are listed in the table below.

ID	0 min.	1 min.	2 min.	3 min.	5 min.	10 min.
GAC1240CCC	4.1	2.0	1.4	1.1	0.7	0.2
Leading Competitor's Brand	4.1	2.6	2.3	2.0	1.4	0.8

GAC1240CCC exhibited the best monochloramine removal performance compared to the competitor's brand. After two minutes carbon monochloramine contact GAC1240CCC removed 65.85% of the monochloramine while the leading competitor's brand removed 46.34%. At 10 minutes GAC1240CCC was 1.2 times more effective than the leading competitor's brand at removing monochloramine.

The hydrogen sulfide capacity was determined by ASTM standard method and GAC1240CCC had a hydrogen sulfide capacity of 0.18 g/cc and the competitive brand a capacity of 0.16 g/cc.

#### Conclusions

- Both catalytic carbons performed well
- GAC1240CCC was superior for monochloramine reduction in water compared to the leading competitor's brand.
- GAC1240CCC revealed a better Hydrogen Sulfide Capacity at 0.18 g/cc versus 0.16 g/cc for the leading competitor's brand
- GAC1240CCC has similar particle size distribution as the leading competitor's brand. GAC1240CCC has a higher uniformity coefficient due to extending the 12-30 mesh range.

