



Granular Activated Carbon (Trade Names – RGC, AquaGuard®, WV-B, WV-A, WV-C, WV-M)

Overview

Ingevity's NUCHAR® activated carbon products are derived from wood - assuring greater purity and superior performance through higher surface area and pore volume per gram than other raw material alternatives. Ingevity manufactures wood-based activated carbon in the U.S. and China to provide customers around the world with a dependable product supply. Ingevity manufacturing sites that make granular activated carbons are located at Covington, Virginia, U.S., Wickliffe, Kentucky, U.S. and Zhuhai, Guangdong, China.

Chemical identity

Activated Carbon, CAS 7440-44-0

Uses and applications

NUCHAR® granular activated carbons are excellent for low pressure drop, high-efficiency purification of liquids, gases and vapors in fixed bed applications. The low apparent density of NUCHAR® granular activated carbons is advantageous in single use fixed-bed applications as it requires fewer pounds to fill a vessel. Available in several grades, our granular activated carbon covers a range of pore size distributions, surface chemistries, particle size distributions, and purity levels.

Automotive – Ingevity Corporation is the leading, worldwide resource for activated carbon products used in evaporative emission control systems for the automotive industry. For over 35 years, our development, testing and research have continuously improved activated carbon products used to control automobile emissions. We manufacture a wide range of NUCHAR® granular activated carbons specifically designed for gasoline vapor recovery. Customers can select activated carbon products with the proven physical properties and design flexibility needed to achieve optimum performance in their own canister systems. The features and benefits of Ingevity's granular automotive carbons include the highest working capacity, low density, low flow restriction, low diurnal emissions, and superior durability.

Food – Ingevity's granular carbons are used in fixed beds to purify different types of liquid food ingredients, including edible oils, extracts, concentrates, acids, and additives. These carbons adsorb high molecular weight color bodies and impurities to a greater degree due to their large volume of meso and macro pores.

Beverage – Ingevity's granular carbons are used in fixed beds for decolorization, deodorization, and contaminant reduction of liquids, including juices, concentrates, malt alternatives, and distilled spirits. The large volume of meso and macro pores allows highly efficient adsorption of high molecular weight color bodies, off flavors, and impurities.

Chemicals – Ingevity's granular carbons are used in the purification and decolorization of different types of liquid phase fixed bed processing for use in a variety of chemicals and chemical intermediates. NUCHAR® granular activated carbons are suitable for single use applications and applications where in situ chemical regeneration is used. They are not suitable where large scale thermal reactivation and transport are used.

Municipal drinking water – Ingevity's granular activated carbons are widely recognized as especially effective for purifying drinking water and industrial water/beverage water, and are particularly suited for the reduction of MIB (Methyl Isoborneol) and Geosmin taste and odor components, TOC, and herbicides such as atrazine. The ultra-low-dust and high quality aspects of these granular carbons allow for the use of fewer pounds of carbon to achieve higher levels of taste, odor, color, and agricultural organics removal in municipal water supplies. Low ash content prevents the formation of scale in water treatment systems.



Point of Use/Point of Entry Water Filtration – NUCHAR® RGC and AquaGuard granular activated carbons are effective for purifying drinking water at the end of tap and point of entry into the home. These particular carbons are used in carbon filled cartridges and block filters for the reduction of chlorine, taste, and odor components. The ultra-low-dust and high quality aspects of our POU/POE carbons allow for the use of fewer pounds of carbon to achieve higher levels of chloramine, chlorine, taste, and odor removal in point-of-use water filters and pitchers.

Other uses - Air purification, Organic vapor control, Odor control, Acid gas/corrosive gas and metals removal

Physical/chemical properties

Black granular solid

Odorless

Consult the specific safety data sheet and product data bulletin for more details or contact the company directly for more information.

Health effects

Always refer to the specific SDS for detailed information on safety. Never enter a confined space containing wet, activated carbon. Wet, activated carbon will adsorb oxygen and asphyxiation may result.

This material is not a skin irritant, eye irritant, or corrosive agent although it is considered a nuisance particulate and exposure can be irritating.

Environmental effects

Always refer to the specific SDS for more detailed information.

There are no known significant environmental effects or critical hazards from Ingevity activated carbon products. The product itself and its products of degradation are not toxic.

Exposure and risk management recommendations

Always refer to the specific SDS for detailed information on exposure and first aid measures.

Workplace – Possible routes of entry – eye contact, dermal contact, inhalation

Consult with the current guidelines for exposure limits for nuisance particulates.

Keep containers tightly closed and in a cool, well-ventilated area.

Avoid creating dusty conditions.

Consumer use – Consumer use and exposure should be negligible.

Environment – The generation of waste should be avoided or minimized wherever possible. The most likely affected media in release scenarios would be to air, ground, or water. Clean-up efforts should avoid dispersal of spilled material and runoff onto soil, waterways, drains, and sewers. If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for proper disposal in a manner compliant with all applicable regulatory requirements.



Conclusion

Many NUCHAR® granular activated carbon products are Certified to NSF/ANSI 61 and NSF/ANSI 42. Please consult the NSF website (www.nsf.org) for a current listing of certified products.

NUCHAR® granular activated carbon products also meet the food grade quality of activated carbons as defined in the current edition of the Food Chemicals Codex. Per 21 CFR 170.30(c)(1), activated carbons that meet FCC specs are considered GRAS for use in processing where the carbon is removed.

No warranties of use or otherwise are expressly made or implied from this information. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown hazards and should be used with caution.