

NUSORB® KIG™ CARBON TECHNICAL DATA SHEET

RADIOIODINE REMOVAL PERFORMANCE

Test Conditions	Guaranteed Performance	Typical Performance
I ₂ (elemental), 30° C, 95%RH	<0.1% penetration	0.05 % penetration
I ₂ (elemental) retention, 180° C	>99.5% (loading plus elution)	99.9% (loading plus elution)
Methyl iodide, 25° C, 95%RH	<1.0 % penetration	0.50% penetration
Methyl iodide, 30° C, 95%RH	<1.0 % penetration	0.50% penetration
Methyl iodide, 80° C, 95%RH	<0.5% penetration	0.10% penetration
Methyl iodide, 130° C, 95%RH	<1.0% penetration	0.10% penetration

Physical Properties

Carbon Tetrachloride Activity (ASTM D3467)	60% Minimum on base carbon
Ash Content (ASTM D2866)	4% Maximum on base carbon
Apparent Density (ASTM D2854)	0.48-0.54 g/mL
Hardness (ASTM D3802)	97 % Minimum
Ignition Temperature (ASTM D3466)	330° C Minimum
Impregnant Content (by extraction)	5% Maximum (Potassium Iodide Salts)

Particle Size Distribution

U. S. Sieves (ASTM D2862)

On 6 Mesh	0.1% Maximum
On 8 Mesh	5.0% Maximum
8 x 12 Mesh	60% Maximum
12 x 16 Mesh	40% Minimum
Thru 16 Mesh	5.0% Maximum
Thru 18 Mesh	1.0% Maximum

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NUSORB® KIG™ satisfies US NRC Reg. Guides 1.52 and 1.140 requirements.

These product specifications are based on the latest US NRC requirements for "Engineered Safety Feature" systems.

1. US NRC Regulatory Guide 1.52, Rev 2, March 1978; "Design, Testing and Maintenance Criteria for Engineered Safety Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants."
2. US NRC Regulatory Guide 1.140, Rev. 1, October 1979; "Design, Testing, and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants."
3. ASTM D3803-89 "Standard Method For Radioiodine Testing of Nuclear Grade Gas Phase Adsorbents."
4. ANSI/ASME N509, Table 5.1; "Nuclear Power Plant Air-cleaning Units and Components." (all editions)
5. ANSI/ASME AG-1, Section FF; "Code on Nuclear Air and Gas Treatment."
6. Information herein is accurate to the best of our knowledge. User should determine the suitability for the product for the intended use; NUCON® liability consists of replacing product. NUCON® does not suggest violation of any existing patent or give permission to practice any patented invention without a license.
7. Standard pricing and acceptance of orders are based on supply of material and documentation according to client specification of one (1) performance standard. Supply of material and documentation conforming to two (2) or more performance standards may require additional testing and be subject to additional fees.

IMPORTANT SAFETY INFORMATION

CAUTION: OXYGEN IS REMOVED FROM AIR BY WET ACTIVATED CARBON.

Oxygen may be rapidly reduced to a hazardous level in closed or partially closed tanks, receptacles or other enclosed space containing carbon. When entering any enclosed space, regardless of its contents, follow recommended safety procedures (see MCA Safety Guide SG-10, "Recommended Safe Practices and Procedures, Entering Tanks and Other Enclosed Spaces", Mfrg. Chem. Assoc., 1825 Connecticut Ave., N.W., Washington, D.C., 20009).