



TECHNICAL DATASHEET

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JACOBI
THE CARBON COMPANY

AddSorb® RC1

impregnated coconut shell based activated carbon

Features and Benefits

- Chemically impregnated
- Consistent quality
- Exceptional hardness and strength
- Clean handling at adsorber loading and commissioning

Test Methods

- ASTM D 3803-89 "Standard Method for Radioiodine Testing of Nuclear Gas Phase Adsorbents."
- ANSI/ASME N 509, Table 5.1; "Nuclear Power Plant Air-cleaning Units Components." (all editions)
- ANSI/ASME AG-1, Section FF; "Code on Nuclear Air and Gas Treatment"

Coimpregnation

Triethylenediamine (TEDA) improves performance for capture of methyl iodide under special conditions, such as low temperature and high humidity.

AddSorb® RC1 is an impregnated activated carbon manufactured by steam activation from carefully selected coconut shell charcoal, meeting the requirements of: 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." 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."

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

Specification

CTC activity (base carbon)	min. 60%
Moisture content	max. 5%
Total ash content (base carbon)	max. 4%
Apparent density	500 - 540 kg/m ³
Ball-pan hardness	min. 98%
Ignition temperature	min. 340°C
Impregnant content (by extraction)	(reacted iodine and amine salts) max. 5%

Standard Packaging

- 25 kg bag (55 lb)
- 500 kg bulk bag (1100 lb)



The polyethylene valve bag from Jacobi sets the standard in the industry for clean, durable and safe handling.

Particle Size Distribution

>6 mesh	max. 0.1%
>8 mesh	max. 5.0%
8x12 mesh	min. 40.0%
12x16 mesh	max. 60.0%
<16 mesh	max. 5.0%
<18 mesh	max. 1.0%

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Polyethylene valve bags of
25 kg (55 lb) net weight on
500 kg (1100 lb) pallets



Polypropylene liner-free
FIBCs (super sacks) of
500 kg (1100 lb) net weight

CAUTION Activated carbon is a strong oxidizing agent and can remove oxygen from air under wet or humid conditions. Care should be taken when entering confined spaces where wet activated carbon is present. Ensure the use of correct breathing apparatus. Material Safety Data Sheets should be consulted for further details on procedures in the event of contact with activated carbon.

NOTICE Due to the progressive nature of Jacobi Carbons Group and the continually improving design and performance of our products, we reserve the right to change product specifications without prior notification. The information contained in this datasheet is intended to assist a customer in the evaluation and selection of products supplied by Jacobi Carbons. The customer is responsible for determining whether products and the information contained in this document are appropriate for customer's use. Jacobi Carbons assumes no obligation or liability for the usage of the information in this datasheet, no guarantees or warranties, expressed or implied, are provided. Jacobi Carbons disclaims responsibility and the user must accept full responsibility for performance of systems based on this data.

