Potassium Iodide Impregnated Activated Carbon Technical Data Sheet (TDS)

1. Product Description

Potassium Iodide Impregnated Activated Carbon (KI-IAC) is a chemically modified activated carbon designed for effective removal of elemental mercury vapor, radioactive iodine, and acidic gases from air and process streams. Produced from high-quality coal or coconut shell activated carbon, the material is impregnated with potassium iodide (KI) to enhance catalytic reactivity and chemical adsorption performance. This product is widely used in air filtration for laboratories, nuclear facilities, and industrial exhaust gas treatment.

2. Typical Physical & Chemical Properties

Item	Unit	Typical Value
Iodine Number	mg/g	850–1000
Surface Area (BET)	m^2/g	900–1100
Impregnant Type	–	Potassium Iodide (KI)
KI Loading	% (wt)	3–10
Moisture	%	≤10
Ash	%	≤8
Hardness	%	≥90
Bulk Density	g/cm^3	0.45–0.55
Particle Size	mm	1.5–4.0 (customizable)
Appearance	–	Black granular or cylindrical

3. Applications

- Mercury vapor adsorption in air purification systems
- Radioactive iodine capture in nuclear facility ventilation
- Removal of acidic gases such as HCl and SO_2
- Odor and toxic gas control in laboratory exhaust systems
- Industrial waste gas treatment and emergency filtration units

4. Packaging & Storage

Packed in 25 kg polyethylene-lined bags or jumbo bags (500 kg / 1000 kg). Store in a dry and ventilated area, protected from direct sunlight, moisture, acids, and oxidizers. Handle carefully to prevent dust generation and protect the impregnant chemistry from contact with high humidity.

5. Quality & Compliance

Produced under an ISO 9001–certified quality system with testing in accordance with ASTM and AWWA standards. Each batch is evaluated for impregnant uniformity, activity, hardness, and adsorption performance.

6. Remark

The above data are representative of typical values and for reference only. For specialized applications or custom impregnation ratios, please contact Henan CarbonFresh Activated Carbon technicalsupport. The company reserves the right to update specificati
ons without prior notice.

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