

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Activated Carbon
- English Name: Activated Carbon
- CAS Number: 7440-44-0
- Formula: C (Main Component) + Inorganic Ash (Minor)
- Molecular Weight: Variable (Elemental C: 12.01 g/mol)
- Product Characteristics: High-performance adsorbent with large specific surface area (> 1000 m²/g) and abundant porous structure. Efficiently adsorbs organic pollutants, heavy metals, odors, and VOCs through physical and chemical adsorption. Non-toxic, inert, environmentally friendly, and stable under normal use conditions. Available in powdered or granular form for different application scenarios.

2. Technical Specifications (Complies with Industrial Standards)

Item	Specification
Appearance	Black powder or granular solid
Iodine Adsorption Value	≥ 800 mg/g
Methylene Blue Adsorption Value	≥ 150 mg/g
Moisture Content	≤ 10.0%
Ash Content	≤ 8.0%
pH Value (1% Aqueous Suspension, 25°C)	6.0-9.0
Particle Size	20-100 mesh (granular); 200-400 mesh (powdered)
Bulk Density	0.4-0.8 g/cm ³
Specific Surface Area	≥ 1000 m ² /g
Heavy Metals (Pb)	≤ 5 ppm
Heavy Metals (As)	≤ 1 ppm
Mercury (Hg)	≤ 0.1 ppm
Cadmium (Cd)	≤ 0.5 ppm
Total Bacterial Count	≤ 100 CFU/g
E. coli	Negative
Temperature Stability	Stable at ≤ 300°C (adsorption efficiency retention ≥ 90%)

3. Product Advantages

1. **High Adsorption Efficiency:** Large specific surface area and porous structure enable rapid and effective adsorption of various pollutants.
2. **Multi-Functional:** Adsorbs organic matter, heavy metals, odors, VOCs, and pigments; suitable for water, air, and industrial purification.
3. **Safe & Environmental:** Non-toxic, inert, no secondary pollution; compatible with ecological systems.
4. **Wide Adaptability:** Effective over pH 4.0-10.0 and temperature 0-200°C; suitable for harsh working conditions.
5. **Cost-Effective:** Long service life; regenerable (via heating or washing) for repeated use; low operating costs.

4. Application Fields

- **Water Treatment:** Drinking water purification (removes chlorine, odors, organic pollutants); municipal sewage treatment; industrial wastewater treatment (printing, dyeing, electroplating, chemical industry).



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- **Air Purification:** Indoor air purification (removes formaldehyde, benzene, VOCs); industrial waste gas treatment; vehicle air filters; odor control (garbage transfer stations, sewage plants).
- **Industrial Processing:** Decolorization of dyes, sugars, and chemicals; solvent recovery (ethanol, acetone); catalyst support.
- **Food & Beverage:** Decolorization and deodorization of edible oils, fruit juices, and alcoholic beverages.
- **Medical & Health:** Oral antidote for poisoning; wound dressings; air purification in hospitals.

5. Usage Methods

- **Dosage (Adjust according to application scenario):**
 - Water Treatment: 5-50 g/L (powdered); 50-200 g/L (granular, packed column).
 - Air Purification: 100-500 g/m³ (granular, adsorption bed); 5-10 g/m² (powdered, spray coating).
 - Industrial Decolorization: 0.5-5.0% (based on material weight).
- **Addition Method:**
 - Powdered: Directly add to liquid/solid mixture, stir evenly, and filter/settle to separate.
 - Granular: Fill into adsorption columns/tanks; pass fluid through at a controlled flow rate (5-10 BV/h).
- **Optimal Conditions:** pH 4.0-10.0, temperature 15-60°C; pre-treat with water to remove dust before use.

6. Packaging & Storage

- **Packaging Specifications:**
 - 25 kg kraft paper bags with PE inner lining (powdered/granular).
 - 1000 kg FIBC bulk bags (large-scale industrial use).
 - Custom packaging available upon request.
- **Storage Conditions:**
 - Store in a cool, dry, well-ventilated warehouse. Avoid moisture, direct sunlight, and high temperature ($\leq 30^{\circ}\text{C}$).
 - Keep containers tightly closed to prevent dust dispersion and moisture absorption.
 - Store separately from strong oxidizing agents; avoid mixing.
- **Shelf Life:** 24 months (unopened, under specified conditions); 6 months after opening.
- **Transportation:**
 - Non-hazardous goods; transport by ordinary vehicles.
 - Avoid collision, leakage, and moisture during transport; cover with waterproof cloth if necessary.

7. Safety & Protection

- The product is non-toxic and non-hazardous. Avoid inhaling large amounts of dust.
- Wear dust mask (FFP1), safety glasses, and nitrile rubber gloves during handling.
- In case of eye contact, rinse with plenty of water for 5-10 minutes; consult a doctor if irritation persists.
- Do not ingest; if accidentally swallowed, rinse mouth with water and consult a doctor if discomfort occurs.

8. Quality Assurance

- The product is manufactured in accordance with ISO 9001 and ISO 14001 quality and environmental management system standards.
- Each batch of product is tested and accompanied by a Certificate of Analysis (COA) to ensure compliance with industrial standards.
- We provide technical support for product application, including dosage adjustment, adsorption system design, and regeneration guidance.