Material Safety Data Sheet (MSDS) ——Catalytic Activated Carbon

1. Identification of the Substance or Mixture and of the Company

Product name: Catalytic Activated Carbon
Intended use: Removal/filtration of the following from drinking water and wastewater: suspended solids (≤ 1 μm), humic substances (organics), tannins and lignin, color and odor, hydrogen sulfide (H2S), chloramines, trihalomethanes (THMs), phenol and p-nitrophenol, various dyes, and inorganic heavy metals including arsenate, arsenite, chromium, copper, cyanides, fluoride, lead, mercury, and selenium.
Company identification/Supplier：Henan CarbonFresh Activated Carbon Co., Ltd.
Website: https://www.carbonfreshcn.com/
Email: info@carbonfreshcn.com
Phone: (+86) 155-3801-7198
Address: Enterprise Headquarters Base, Innovation Park, High-tech Zone, Zhengzhou, Henan, China

2. Composition/Information on Ingredients

Chemical nature: Granular activated carbon coated with iron(III) oxyhydroxide

Table: Composition

Component	Chemical identity	Formula	CAS No.	Content (w/w)
GAC	Carbon	C	7440-44-0	> 85%
Iron(III) oxyhydroxide	Iron(III) oxyhydroxide	FeO(OH)	20344-49-4	< 15%

Values listed are typical and do not constitute specifications. Remaining components are proprietary, non-hazardous, and/or present below reportable limits.

3. Hazards Identification

Classification of the substance or mixture

○ According to Regulation (EC) No. 1272/2008 (CLP): Not required to be classified or labeled under 2008/1272/EC.
○ According to Directives 67/548/EEC and 1999/45/EC: Not required to be classified or labeled under 67/548/EEC or 1999/45/EC.

Label elements

○ Under Regulation (EC) No. 1272/2008: No labeling required.
○ Under Directives 67/548/EEC or 1999/45/EC: No labeling required.

Emergency overview: Contact may cause irritation to the eyes, skin, respiratory system, and gastrointestinal tract.

Potential health effects:

- Inhalation: May cause mild respiratory irritation.
- Ingestion: Not generally expected to be harmful by ingestion. Small amounts may cause slight gastrointestinal irritation; large amounts may cause GI discomfort. Symptoms may include irritation, nausea, vomiting, abdominal pain, and diarrhea.
- Skin contact: May cause mild irritation.
- Eye contact: May cause eye irritation. Abrasive dust particles may damage eyes.
- Aggravation of pre-existing conditions: Exposure may aggravate pre-existing eye, skin, central nervous system, gastrointestinal, and respiratory conditions (e.g., bronchitis, emphysema, asthma).

4. First Aid Measures

General: Remove contaminated clothing. Immediately rinse with plenty of water for at least 10 minutes. Seek medical attention if symptoms persist.
Eye contact: Rinse cautiously with running water for at least 15 minutes. Seek medical advice if irritation persists.
Skin contact: If irritation occurs, wash with plenty of water and a nonabrasive soap for at least 15 minutes. Seek medical advice if symptoms persist.
Inhalation: Move the person to fresh air; keep at rest and warm. If unconscious, place in a stable lateral position for transport. Seek medical advice.
Ingestion: Rinse mouth with water. If fully conscious, give 1–2 glasses of water immediately. Seek medical attention.

5. Firefighting Measures

Generally not considered a fire hazard. However, as a carbonaceous material, it may increase the burning rate of combustible materials.
Autoignition temperature: ≥ 350 °C
Hazardous combustion products: Carbon monoxide and carbon dioxide.
General hazards: Substances adsorbed on activated carbon may also be released during a fire.
Extinguishing media: Water spray, foam, dry chemical.
Protective equipment: Self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

Contain the released material.
Personal protection: Wear eye protection and protective clothing.
Environmental precautions: Prevent entry into drains and waterways.
Cleanup methods: Vacuum or sweep up and place in designated waste containers.
Avoid dust generation.
Disposal: Dispose of in accordance with applicable local, state, and federal regulations.

7. Handling and Storage

- **Handling**: Handle as a typical chemical. If used in large quantities without adequate local exhaust, wear a dust mask. Avoid formation and accumulation of dust. Take precautions to prevent static discharge. Wash hands after handling.

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- **Storage:** Keep in tightly closed containers in a cool, dry, well-ventilated area. Protect from physical damage. Keep containers closed when not in use. The product or its components are strong oxidizers; do not store with organics or other strong reducing or incompatible materials (e.g., hydrogen peroxide, sodium peroxide). Empty containers may be hazardous due to product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Exposure limits: No specific limit established; comply with national occupational exposure limits for dust.

Personal protective equipment (PPE):

- **Ventilation:** Use local and/or general exhaust to keep exposures below airborne exposure limits. Local exhaust is typically preferred as it controls emissions at the source and prevents dispersion into the general work area. Refer to ACGIH “Industrial Ventilation, A Manual of Recommended Practices” (latest edition).
- **Respiratory protection (NIOSH-approved):** If exposure exceeds limits, use a half-face dust/mist respirator up to 10× the exposure limit or the 、 、 maximum use concentration specified by the relevant authority or respirator supplier (whichever is lower). For a full-face dust/mist respirator, up to 50× the exposure limit or the maximum use concentration (whichever is lower). In emergencies or when exposure levels are unknown, use a positive-pressure, supplied-air full-face respirator.
- **Eye protection:** Chemical safety goggles and/or face shield where dust or solution splashes may ccur. Provide eyewash stations and safety showers in the work area.
- **Skin protection:** Wear appropriate protective clothing. Avoid skin contact with spilled product.
- **Warning:** Air-purifying respirators do not protect workers in oxygendeficient atmospheres.

9. Physical and Chemical Properties

General information:

- Physical state: Solid
- Appearance: Black granules
- Odor: Odorless
- Particle size: 0.6–2.4 mm
- Autoignition temperature: ≥ 350 °C
- Melting point: Not applicable
- Bulk density: 630–635 kg/m³
- Solubility in water at 20 °C: Insoluble

10. Stability and Reactivity

- Chemical stability: Stable.
- Conditions to avoid: Heat and ignition sources; strong oxidizers and combustible materials.
- Hazardous decomposition products: CO, CO_2 .
- Hazardous polymerization: Will not occur.

11. Physical and Chemical Properties

Information on toxicological effects:

- Animal toxicity: Acute oral toxicity (LD50): 50,000 mg/kg (rat).
- Chronic effects in humans: No data available.

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○Other toxic effects on humans: Slightly harmful by skin contact (irritation), ingestion, and inhalation.
○Special remarks on animal toxicity: No data available.
○Special remarks on chronic effects in humans: No data available.

12. Ecological Information

- **Ecotoxicity:** No data
- **Environmental fate:** No data

This product has not been tested as a whole. The above statements are based on the properties of individual components.

13. Disposal Considerations

○**General:** As supplied, this product is not a listed RCRA hazardous waste and does not exhibit any hazardous waste characteristics (including toxicity).
○**Component waste codes:** No EPA waste numbers are applicable to the components of this product.
○**Recommendation:** Disposal must comply with official regulations.
○**Waste disposal method:** Landfill disposal is generally acceptable. Dispose of in accordance with all applicable federal, state, and local laws, regulations, and ordinances. If this product has been altered or contaminated by other hazardous substances, an appropriate waste analysis may be required to determine the proper disposal method. A qualified environmental professional should determine waste characterization and disposal/treatment methods for this material in accordance with applicable federal, state, and local requirements. Any portions that cannot be recycled or recovered should be managed at an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change waste management options. State and local disposal regulations may differ from federal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. Transport Information

- **Road (ADR/RID/ADN):** Not regulated as dangerous goods
- **Sea (IMDG/IMO):** Not regulated as dangerous goods
- **Air (IATA/ICAO):** Not regulated as dangerous goods
- Catalytic Carbon™ is not classified as a hazardous material under U.S. DOT and is not regulated by the Transportation of Dangerous Goods (TDG) regulations for any mode of transport.

15. Regulatory Information

Safety, health, and environmental regulations/legislation specific for the substance or mixture:
○CLP labeling per Regulation (EC) No. 1272/2008: Not classified or labeled.
○Not listed/controlled under: CDTA, Chemical Weapons Convention.

NFPA ratings；

Component	CAS No.	Health	Flammability	Reactivity	Other
GAC	7440-44-0	0	1	0	—
Iron(III) oxyhydroxide	20344-49-4	1	0	0	Alkaline

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16. Disclaimer

The information contained herein is believed to be accurate and reliable, but no express or implied warranties or guarantees are made. Users should conduct their own tests to determine the product's suitability for the intended use. Henan CarbonFresh Activated Carbon Co., Ltd.assumes no responsi bility for any loss,damage, or injury resulting from the use of this product or reliance upon this data s heet.