Manganese Sand Filter Media Safety Data Sheet (SDS) — Full English Translation

1. Product Identification

- Trade name: Manganese Sand
- Recommended use: Filtration media
- Restrictions on use: No known restrictions **Manufacturer/**

Importer/Supplier/Distributor

- Company: Henan CarbonFresh Activated Carbon Co., Ltd.
- Website: https://www.carbonfreshcn.com/
- Email: info@carbonfreshcn.com
- Phone: (+86) 155-3801-7198
- Address: Innovation Park, Enterprise Headquarters Base, High-tech Zone, Zhengzhou, Henan Province, China

2. Composition/Information on Ingredients

- Substance/Mixture: Mixture

Main component:

Chemical name: Manganese dioxide (MnO_2)

- CAS No.: 1313-13-9
- Content: 70–80%

Other components:

Calcium oxide
- CAS No.: 1305-78-8
- Content: 0–15%

Iron
- CAS No.: 7439-89-6
- Content: 1–15%

Quartz (silica, SiO_2)
- CAS No.: 14808-60-7
- Content: 0–20%

Aluminium oxide
- CAS No.: 1344-28-1
- Content: ≤7%

Magnesium oxide
- CAS No.: 1309-48-4
- Content: ≤5%

Potassium oxide
- CAS No.: 12136-45-7
- Content: ≤3%

Disodium oxide
- CAS No.: 1313-59-3
- Content: ≤1%

Barium oxide
- CAS No.: 1304-28-5
- Content: ≤1%

Titanium dioxide
- CAS No.: 13463-67-7
- Content: ≤1%

Phosphorus
- CAS No.: 7723-14-0
- Content: ≤1%

Note: "*" indicates that the specific chemical identity and/or exact percentage composition is withheld as a trade secret (as stated in the original text).

3. Hazards Identification

Physical hazards: Not classified
Health hazards:
- Acute toxicity (oral): Category 4
- Acute toxicity (inhalation): Category 4
- Serious eye damage/eye irritation: Category 2A
- Specific target organ toxicity (single exposure): Category 3 (respiratory irritation)

Environmental hazards: Not classified
OSHA-defined hazards: Not classified

Label Elements

Signal word: Warning
Hazard statements:
- Harmful if swallowed.
- Causes serious eye irritation.
- Harmful if inhaled.
- May cause respiratory irritation.

Precautionary statements:
- Prevention: Avoid breathing dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye/face protection.
- Response: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. If eye irritation persists: Get medical advice/attention.
- Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.
- Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards not otherwise classified (HNOC): None known
Supplemental information: None

4. First-Aid Measures

- Inhalation: Move the exposed person to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen or artificial respiration if needed. Call a poison center or doctor if you feel unwell.
- Skin contact: Wash with soap and water. If irritation occurs and persists, seek medical attention.
- Eye contact: Do not rub eyes. Immediately rinse cautiously with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. If irritation occurs and persists, seek medical attention.
- Ingestion: Rinse mouth. If vomiting occurs, keep head low to prevent aspiration into the lungs. Seek medical advice/attention if you feel unwell.

- Most important symptoms/effects, acute and delayed: Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation and coughing.
- Indication of immediate medical attention and special treatment needed: Provide general supportive care and treat symptomatically. Keep patient warm and under observation. Symptoms may be delayed.
- General information: If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material involved and take precautions to protect themselves. Provide this SDS to the attending physician.

5. Fire-Fighting Measures

- Suitable extinguishing media: Water mist, foam, dry chemical, carbon dioxide (CO2).
- Unsuitable extinguishing media: Do not use a water jet, as it may spread the fire.
- Specific hazards: Hazardous gases may be released in a fire.
- Special protective equipment and precautions for firefighters: Wear self-contained breathing apparatus and full protective clothing.
- Firefighting measures: Use water spray to cool unopened containers.
- Specific methods: Follow standard fire-fighting procedures and consider the hazards of other involved materials.
- General fire hazards: No unusual fire or explosion hazards noted.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away and keep upwind of spill/leak. Wear appropriate protective equipment and clothing during cleanup. Avoid inhalation of dust. Do not touch damaged containers or spilled material without proper protective equipment. Ensure adequate ventilation. For large, uncontrolled releases, notify local authorities. For personal protection, see Section 8 of the SDS.
- Methods and materials for containment and cleaning up: Avoid creating and dispersing dust (e.g., by compressed air sweeping). If safe, stop the source of the material. Cover with plastic sheeting to prevent spreading. Absorb with vermiculite, dry sand, or earth and place in containers.
  - Large spills: Wet down and dike for later disposal. Shovel material into waste containers. After recovery, flush area with water.
  - Small spills: Sweep or vacuum up and collect in suitable containers for disposal. Wipe with absorbent materials (e.g., rags, nonwoven cloth). Clean thoroughly to remove residue.
- Environmental precautions: Do not return recovered materials to original containers for reuse. For waste disposal, see Section 13 of the SDS. Avoid discharge into sewers, waterways, or soil.

7. Handling and Storage

- Precautions for safe handling: Minimize dust generation and accumulation. Avoid inhaling dust. Avoid contact with eyes. Avoid prolonged exposure. Do not taste or swallow. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
- Conditions for safe storage, including any incompatibilities: Store locked up. Keep in the original, tightly closed container. Store in a well-ventilated place. Keep away from incompatible materials (see Section 10).

8. Exposure Controls/Personal Protection

Occupational exposure limits (US OSHA, 29 CFR 1910.1000 Table Z-1)

- Component: Manganese dioxide
- Ceiling: 5 mg/m³
- Biological limit values: None
- Engineering controls: Provide general good ventilation (typically 10 air changes per hour). Ventilation rate should be matched to conditions. Where applicable, use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne concentrations below recommended limits. Where no limits are specified, maintain at acceptable levels. Provide eyewash facilities.
- Personal protective equipment (PPE):

OEye/face protection: Safety glasses with side shields or chemical goggles.
OSkin protection:
O Hand protection: Wear suitable chemical-resistant gloves (consult glove supplier for specific recommendations).
O Other: Wear appropriate protective clothing. An impermeable apron is recommended.
ORespiratory protection: When ventilation is inadequate, wear appropriate respiratory protection. Use a chemical respirator with cartridges suitable for organic vapors.
OThermal hazards: Wear suitable heat-resistant protective clothing if needed.

- General hygiene considerations: Keep away from food and beverages. Always follow good personal hygiene practices, such as washing hands after handling and before eating, drinking, and/or smoking. Launder contaminated work clothing and PPE regularly.

9. Physical and Chemical Properties

- Appearance: Granular
- Physical state: Solid
- Form: Solid
- Color: Black
- Odor: Odorless
- Odor threshold: No data
- pH: No data
- Melting point/freezing point: No data
- Initial boiling point and range: No data
- Flash point: No data
- Evaporation rate: No data
- Flammability (solid, gas): No data
- Lower explosive limit (%): No data
- Upper explosive limit (%): No data
- Vapor pressure: No data
- Vapor density: No data
- Relative density: No data
- Solubility (water): No data
- Partition coefficient (n-octanol/water): No data
- Auto-ignition temperature: No data
- Decomposition temperature: No data
- Viscosity: No data

10. Stability and Reactivity

Reactivity: The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.
Conditions to avoid: Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological Information

- **Information on likely routes of exposure:**
- Inhalation: Harmful if inhaled.
- Skin contact: Expected to be non-irritating.
- Eye contact: Causes serious eye irritation.
- Ingestion: Harmful if swallowed.
- Symptoms related to the physical, chemical and toxicological characteristics: Nausea, vomiting. Severe eye irritation (stinging, tearing, redness, swelling, blurred vision). May cause respiratory irritation and coughing.
- Acute toxicity: High concentrations of vapor may have narcotic effects causing headache, fatigue, dizziness, and CNS effects. Harmful if inhaled. Harmful if swallowed. May cause respiratory irritation.
- Skin corrosion/irritation: Prolonged skin contact may cause transient irritation.
- Serious eye damage/irritation: Causes serious eye irritation.
- Respiratory or skin sensitization:
- Respiratory sensitization: Not a respiratory sensitizer.
- Skin sensitization: Not expected to be a skin sensitizer.
- Germ cell mutagenicity: No data indicate the product or its components at >0.1% are mutagenic or genotoxic.
- Carcinogenicity: This product is not classified as carcinogenic by IARC, ACGIH, NTP, or OSHA.
- IARC overall evaluations:
- Quartz (SiO2, CAS 14808-60-7): Group 1 — Carcinogenic to humans
- Titanium dioxide (CAS 13463-67-7): Group 2B — Possibly carcinogenic to humans
- OSHA specifically regulated substances (29 CFR 1910.1001–1050): Not listed
- US NTP Report on Carcinogens:
- Quartz (SiO2, CAS 14808-60-7): Known to be a human carcinogen
- Reproductive toxicity: Not expected to cause reproductive or developmental toxicity.
- Specific target organ toxicity (single exposure): May cause respiratory irritation.
- Specific target organ toxicity (repeated exposure): Not classified.
- Aspiration hazard: Not an aspiration hazard.
- Chronic effects: Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity: Not classified as hazardous to the environment. However, large or frequent releases cannot be excluded from having harmful or damaging effects on the environment.
Persistence and degradability: No data.
Bioaccumulative potential: No data.
Mobility in soil: No data.
Other adverse effects: Not expected to have ozone depletion, photochemical ozone creation potential, endocrine disruption, or global warming potential or other adverse environmental effects.

13. Disposal Considerations

Disposal instructions: Collect and reclaim or place in sealed containers for disposal at a licensed waste disposal facility. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations: Dispose in accordance with applicable regulations.
Hazardous waste code: To be determined by the user/producer and the waste disposer.
Residual/unused product: Dispose of in accordance with local regulations. Empty containers or liners may retain product residues. This material and its container must be disposed of safely (see disposal instructions).
Contaminated packaging: Empty containers may retain residues and should be handled as such. Even when emptied, observe label warnings. Send containers to an approved waste handling facility for recycling or disposal.

14. Transport Information

DOT (US): Not regulated as dangerous goods
IATA (Air): Not regulated as dangerous goods
IMDG (Sea): Not regulated as dangerous goods
Bulk transport (MARPOL 73/78 Annex II and IBC Code): Not applicable

15. Other Information

Disclaimer: The information provided in this Safety Data Sheet is believed to be correct as of the date of publication. It is provided for guidance on safe handling, use, processing, storage, transport, disposal, and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid if the material is used in combination with any other materials or in any process, unless specified in the text.