Honeycomb Activated Carbon — Safety Data Sheet (MSDS)

Contact Information

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Section 1: Identification of the Substance and of the Company

- Substance name: Honeycomb Activated Carbon (Activated carbon)
- Synonyms: Activated carbon
- Recommended use: Purification by adsorption to remove color, odor, and taste
- Restrictions on use: No information available
- Supplier information: [Not provided in the source text]

Section 2: Hazard Identification

1.Classification of the substance or mixture

- Activated carbon is listed under the UN Dangerous Goods List as UN 1362. However, according to special provisions (ADR SP 646 and IMDG SP 925), steam-activated activated carbon is not subject to the provisions of those codes and therefore is not considered a dangerous good.
- Classified as non-hazardous under EU Regulation (EC) No. 1272/2008 (CLP) and subsequent amendments.

1.Label elements

- Product identifier: Honeycomb Activated Carbon (Activated carbon)
- Pictograms: None
- Signal word: None
- Hazard statements (H-codes): None
- Precautionary statements (P-codes): None

1.Other hazards not resulting in classification

- Odorless black granules or powder. Avoid contact with skin and eyes. Avoid inhalation of dust. Activated carbon, especially when wet, can deplete oxygen in enclosed spaces.

Section 3: Composition/Information on Ingredients

Chemical name: Honeycomb Activated Carbon
Synonyms: Activated carbon
CAS No.: 7440-44-0
UN No.: 1362 (see special provisions in Section 2)
Impurities and additives: None
Concentration: 100%

Section 4: First-Aid Measures

1.Description of first-aid measures

- Eye contact: Rinse cautiously with plenty of water. Seek medical attention if symptoms occur.
- Skin contact: Wash thoroughly with soap and water. Seek medical attention if symptoms occur.

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- Inhalation: Move to fresh air. If coughing or breathing difficulties occur, consult a physician.
- Ingestion: Drink one to two glasses of water. If gastrointestinal issues occur, consult a physician. Do not give anything by mouth to an unconscious person.

Additional notes:
I. Seek medical attention immediately if symptoms occur.
II. Move the exposed person to an area with uncontaminated, breathable air.
III. There is no need to remove clothing and shoes for first aid; do so later during washing if needed.
IV. First aid should be provided by trained personnel following established procedures for each exposure route.

1.Most important symptoms and effects, both acute and delayed
- Wet activated carbon can reduce oxygen levels in enclosed spaces; assess oxygen and carbon monoxide levels to avoid asphyxiation symptoms.

1.Indication of any immediate medical attention and special treatment needed
- Symptomatic treatment.

Section 5: Fire-Fighting Measures

1.Suitable extinguishing media
- Dry chemical, carbon dioxide, foam, or water mist/spray. If using water, apply as a spray or fog; avoid high-pressure streams that may create air–dust mixtures and spread the fire.

1.Special hazards arising from the substance or mixture
- Carbon monoxide may be produced during combustion. Maintain spacing between pallets to reduce spread risk. Activated carbon is not readily self-igniting; smoldering is more common than open flames, but packaging materials may produce flames.

1.Advice for firefighters
- Firefighters should wear appropriate personal protective equipment, including positive-pressure self-contained breathing apparatus (SCBA). Avoid water jets that may disperse combustible material and spread fire.

Section 6: Accidental Release Measures

1.Personal precautions, protective equipment, and emergency procedures
- Use appropriate PPE to protect clothing, skin, eyes, and respiratory tract.
- Eliminate ignition sources and ensure adequate ventilation.
- Activate and follow the company's emergency response plan.

1.Environmental precautions
- No special environmental precautions are required.

1.Methods and materials for containment and cleaning up
- Being a powder or granular solid, avoid dry sweeping; use absorbent materials such as damp sawdust for cleanup. Do not use brushes or compressed air to create dust clouds; use vacuum systems when possible.
- Unused (spilled) activated carbon may be recovered or disposed of as non-hazardous waste at permitted facilities.
- Spent (exhausted) activated carbon must be contained and disposed of in accordance with applicable regulations.
- Do not reuse empty bags; dispose of them at permitted non-hazardous waste facilities.

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Section 7: Handling and Storage

1.Precautions for safe handling
I. Follow good handling and storage practices to minimize spills, dust generation, and surface accumulation. Provide adequate ventilation. Wear dust respiratory protection, gloves, and safety goggles to avoid or reduce dust exposure. Wash exposed skin with soap and water after handling.
II. Follow general industrial hygiene practices: “No eating or smoking in work areas,” “Wash hands after handling,” and “Keep activated carbon containers closed.”
Conditions for safe storage, including any incompatibilities
Recommended conditions:
I. Storage temperature: ambient
II. Storage pressure: atmospheric
III. Activated carbon is a stable product and requires no stabilizers.
IV. Ensure ventilation to avoid oxygen depletion. Store away from direct heat or open flames, ozone, liquid oxygen, chlorine, permanganates, and all strong oxidizers and strong acids (incompatible).

Section 8: Exposure Controls/Personal Protection

1.Occupational exposure limits (per Mexican Standard NOM-010-STPS-2014)
- Permissible exposure limits (8-hour TWA):

○Inhalable dust of activated carbon: 10 mg/m³
○Respirable dust: 2 mg/m³
1.
Engineering controls
I. Maintain workplace airborne concentrations of activated carbon below the 8-hour limits defined in NOM-010-STPS-2014.
II. Provide natural or mechanical ventilation sufficient to meet those limits.
Personal protective equipment (PPE)
- Wear safety glasses or goggles during dust exposure and provide an eyewash station (contact lenses are not recommended).
- Use respiratory protection compliant with applicable safety regulations.
- Avoid skin contact; wear appropriate dust-resistant work clothing, launder before reuse. Wash skin thoroughly after handling.

Section 9: Physical and Chemical Properties

- Appearance: Black granules or powder, solid
- Odor: Odorless
- Odor threshold: ND (Not determined)
- pH: NA (Not applicable)
- Melting/freezing point: NA
- Boiling point/boiling range: NA
- Evaporation rate: NA
- Flash point: NA
- Flammability (solid/gas): ND
- Upper flammable/explosive limit: NA
- Lower flammable/explosive limit: NA
- Upper limit: ND
- Vapor pressure (20° C, mmHg): ND
- Vapor density: NA

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- Relative density: 0.25–0.56 g/cc
- Solubility in water: Insoluble
- Partition coefficient: NA
- Auto-ignition temperature: ND
- Decomposition temperature (° C): ND
- Viscosity: ND
- Molecular weight: ND
- Volatile content (%): NA
- Dust exposure classification: ND

Note: ND = Not determined; NA = Not applicable.

Section 10: Stability and Reactivity

- Reactivity: Considered stable under specified conditions of use, storage, and transport.
- Chemical stability: Stable under normal temperature and pressure; no stabilizers or inhibitors required.
- Possibility of hazardous reactions: Chemically stable; no polymerization, overpressure, or other hazardous conditions expected.
- Conditions to avoid: Avoid high temperature and high humidity during storage.
- Incompatible materials: Strong oxidizers (e.g., ozone, liquid oxygen, chlorine, permanganates) may cause rapid combustion; also avoid strong acids.
- Hazardous decomposition products: Carbon monoxide and carbon dioxide.

Section 11: Toxicological Information

- Acute toxicity: Not classified. No data available.
- Skin corrosion/irritation: Not classified. No data available.
- Serious eye damage/irritation: Not classified. No data available.
- Sensitization: Not classified. Non-sensitizer based on Local Lymph Node Assay (OECD 429).
- Germ cell mutagenicity: Not classified. No data available.
- Carcinogenicity: Not classified. No data available.
- Reproductive toxicity: Not classified. No data available.
- Specific target organ toxicity — single exposure (STOT-SE): Not classified. No data available.
- Specific target organ toxicity — repeated exposure (STOT-RE): Not classified. No data available.
- Aspiration hazard: Not expected based on industrial experience and available data.
- Supplementary information:
- The material is non-toxic in its original state. Spent activated carbon may exhibit properties of substances it has adsorbed.
- Routes of exposure:
- I. Inhalation: The most common route in workplaces. Dust, vapors, or gases mixed with air may be inhaled. No specific risks expected from activated carbon exposure.
- II. Skin: Less relevant based on material characteristics.
- III. Ingestion: Possible if eating in the work area or eating without washing hands.
- IV. Injection via skin lesions: Existing wounds may allow contamination, potentially causing infection or irritation.
- V. Eyes: Without PPE, while activated carbon is non-corrosive, particulates can cause irritation ranging from mild to severe conjunctivitis.

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Symptoms and effects:

- Based on industrial experience and available data, no adverse health effects are expected from exposure to activated carbon.
- Immediate and delayed effects; chronic effects from short- and long-term exposure: As above, none expected.
- Toxicity values: No information.
- Interactive effects: No information.
- When data for specific chemicals are missing: No specific data.

Section 12: Ecological Information

- Toxicity: Non-toxic. The substance is highly insoluble in water and unlikely to penetrate biological membranes. No known adverse ecotoxicological effects.
- Persistence and degradability: Not expected to degrade.
- Bioaccumulative potential: Not expected based on physicochemical properties.
- Mobility in soil: Not expected; insoluble.
- Other adverse effects: No information available.

Section 13: Disposal Considerations

- Waste disposal: Activated carbon (in its original state) is not a dangerous good or hazardous waste. Dispose of in accordance with applicable regulations.
- Spent (exhausted) activated carbon: May be classified as hazardous waste depending on use, adsorbed substances, and final management method. Dispose of according to applicable regulations.
- Packaging waste: Avoid dust generation and provide adequate protection for workers. Store used packaging sealed. Recovery or reactivation may be feasible disposal options.

Section 14: Transport Information

Activated carbon is listed under UN 1362 in the UN Dangerous Goods List; however, according to special provisions (ADR SP 646 and IMDG SP 925), steam-activated activated carbon is not subject to those provisions and is not considered a dangerous good.

1.UN number: NA (Not applicable)

2.Proper shipping name:

- NOM-002-SCT-2011: Determine per Tables 1 and 2 of this Mexican Official Standard.
- U.S. DOT: Not regulated as provided.
- The following modes are likewise not regulated: ADR (road), RID (rail), ICAO/IATA (air), IMDG (sea).
- MARPOL: International convention.

1.Transport hazard class: NA

2.Packing group: NA

3.Environmental hazards: Activated carbon is not a known marine pollutant.

4.Bulk transport according to MARPOL 73/78 Annex II and the IBC Code: NA

5.Special precautions for user: None.

Section 15: Regulatory Information

1.Safety, health, and environmental regulations specific for the substance or mixture

- Not classified as hazardous. No evidence that this product is restricted by any international protocol or convention.

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1.Hazard classification by jurisdiction
- Mexico: NOM-018-STPS-2000 / 2015: Non-hazardous
- United States: OSHA (29 CFR 1910.1200): Non-hazardous
- Canada: WHMIS (CPR, SOR/88-66): Uncontrolled

Note: Activated carbon is not restricted or prohibited in Mexico or other countries where it is sold.

Section 16: Other Information (including SDS preparation and updates)

Abbreviations:
- ND: Not determined
- NA: Not applicable
- CAS: Chemical Abstracts Service
- RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
- UN: United Nations
- HDS: Safety Data Sheet
- MARPOL: International Convention for the Prevention of Pollution from Ships
- SETIQ: Emergency Telephone Service for the Chemical Industry (Mexico)
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- OECD: Organisation for Economic Co-operation and Development
- ICAO: International Civil Aviation Organization
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods Code

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