

## **SAFETY DATA SHEET (SDS)**

### **ExPure® Media – Nano-Fe<sub>3</sub>O<sub>4</sub> / Al<sub>2</sub>O<sub>3</sub> Composite Beads (Dried)**

#### **1. Identification**

Product Name: ExPure® Media – Nano-Fe<sub>3</sub>O<sub>4</sub> / Al<sub>2</sub>O<sub>3</sub> Composite Beads (Dried)

Product Form: Solid beads / granules

Recommended Use: Functional filtration and adsorbent media for water and wastewater treatment

Supplier: ExPure

Address: 791 Atlantic Dr. N.W., Atlanta, GA 30318, United States

Phone:

Emergency Phone:

SDS Date: 2026-01-16

Revision: 1.1 (Added Al<sub>2</sub>O<sub>3</sub>)

#### **2. Hazard(s) Identification**

Not classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200) when handled as intact beads.

Potential Hazards:

- Dust generation if mechanically damaged
- Mechanical eye irritation
- Temporary respiratory irritation
- Slip hazard if spilled

Nanomaterial Statement:

Contains nano-scale iron oxide (Fe<sub>3</sub>O<sub>4</sub>) embedded within a polymer matrix; nanoparticles are not free-flowing under normal use.

#### **3. Composition / Information on Ingredients**

Mixture (solid composite beads):

- Polyvinyl alcohol (PVA), CAS 9002-89-5 – polymer binder
- Sodium alginate, CAS 9005-38-3 – biopolymer matrix
- Iron(II,III) oxide (Fe<sub>3</sub>O<sub>4</sub>), nano, CAS 1317-61-9 – magnetic nanoparticles
- Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), CAS 1344-28-1 – inorganic adsorbent

All concentrations are proprietary.

#### **4. First-Aid Measures**

Inhalation: Move to fresh air. Seek medical attention if symptoms persist.

Skin Contact: Wash with soap and water.

Eye Contact: Rinse with water for at least 15 minutes.

Ingestion: Rinse mouth. Do not induce vomiting.

#### **5. Fire-Fighting Measures**

Suitable Extinguishing Media: Water spray, foam, dry chemical, CO<sub>2</sub>.

Hazards: Polymer combustion may generate carbon oxides; inorganic oxides may remain.

Protective Equipment: Self-contained breathing apparatus (SCBA).

#### **6. Accidental Release Measures**

Avoid dust formation. Sweep or vacuum beads carefully. Use HEPA vacuum for fines.

Prevent release to drains or waterways.

#### **7. Handling and Storage**

Handle gently to minimize abrasion.

Store sealed, dry, at room temperature.

Keep away from strong oxidizers and strong acids/bases.

#### **8. Exposure Controls / Personal Protection**

Exposure Limits: None established.

Engineering Controls: General ventilation.

PPE: Safety glasses, gloves. Use N95/P100 respirator if dust is generated.

#### **9. Physical and Chemical Properties**

Appearance: Black solid beads or granules

Odor: Odorless

Solubility: Insoluble in water

Dustiness: Low unless mechanically damaged

#### **10. Stability and Reactivity**

Stable under normal conditions.  
Avoid strong oxidizers.  
Decomposition products: carbon oxides, iron oxides, aluminum oxides.

## 11. Toxicological Information

Not expected to be acutely toxic.  
Dust may cause mechanical irritation.  
Nano- $\text{Fe}_3\text{O}_4$  is embedded and not bioavailable under normal handling conditions.

## 12. Ecological Information

Low environmental risk as solid composite material.  
Avoid uncontrolled release of fine particles.

## 13. Disposal Considerations

Dispose according to local, state, and federal regulations.  
Generally suitable for non-hazardous solid waste disposal.

## 14. Transport Information

Not regulated for transport.

## 15. Regulatory Information

Not classified as hazardous under OSHA HCS.  
Components listed on TSCA Inventory.

## 16. Other Information

Prepared by ExPure.  
Provided in good faith for industrial and research use.