Material Safety Data Sheet

ACS Material Molecular Sieve SAPO-34

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Revision: 092315
1. Product and Company Identification

**Product Name:** ACS Material molecular sieve SAPO-34.

**Synonyms:** Silica, SiO₂, molecular sieve SAPO-34, Molecular sieve, Zeolite SAPO-34.

**CAS NO.:** 1318-02-1.

**Contacting Information:**

Manufacturer: ACS Material, LLC.
Address: 18 Vernon Street, Medford, MA 02155
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2. Composition/Information on Ingredients

**Preparation Method:** Hydrothermal Method

**Linear formula:** (SiO₂)ₓ(Al₂O₃)ₙ(P₂O₅)ₓ

**BET surface area (m²/g):** ≥550

**SiO₂ (%):** ~10%

**Al₂O₃ (%):** ~42%

**Na₂O (%):** ≤0.1

3. Hazards Identification

**Emergency Overview:** White, odorless, powder. Causes respiratory irritation. Causes mild eye irritation. May cause skin irritation. Ammonia released on contact with strong bases. Noncombustible. Ammonia or nitrogen oxides may be released at high temperatures.

**Eye contact:** Causes mild eye irritation.

**Skin contact:** Prolonged or repeated contact may dry skin and cause irritation. Inhalation: Causes irritation.

**Ingestion:** No known hazards. Inedible.

**Chronic hazards:** No known hazards.

**Physical hazards:** Absorbs water from air and fluids. Generates heat when it absorbs water.

4. First Aid Measures

**Eye:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

**Skin:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Not applicable.

5. Fire Fighting Measures

Flammable limits: This material is noncombustible.

Extinguishing Media: This material is compatible with all extinguishing media.

Hazards to fire-fighters: Ammonia or nitrogen oxides may be released at high temperatures.

Fire-fighting equipment: The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: self-contained breathing apparatus (SCBA), chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots.

6. Accidental Release Measures

Personal protection: Wear safety goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots, NIOSH-approved dust respirator where dust occurs. See section 8. Environmental Hazards: Sinks in water. No know environmental hazards.

Small spill cleanup: Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use appropriate Personal Protective Equipment (PPE). See section 8.

Large spill cleanup: Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use appropriate Personal Protective Equipment (PPE). See section 8.

CERCLA RQ: There is no CERCLA Reportable Quantity for this material. If a spill goes off site, notification of state and local authorities is recommended.

7. Handling and Storage

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep container closed. Promptly clean up spills. Wash thoroughly after handling.

Storage: Keep containers closed. Store separated from strong bases in original containers or clean metal, plastic, or fiber containers.

8. Exposure Controls, Personal Protection

Engineering controls: Use with adequate ventilation. Safety shower and eyewash fountain should be within direct access.

Respiratory protection: Use a NIOSH-approved dust respirator where dust occurs. Observe OSHA regulations for respirator use (29 C.F.R. §1910.134)

Skin protection: Wear body-covering protective clothing and gloves.
Eye protection: Wear safety goggles.

9. Physical and Chemical Properties

Appearance: White powder.
Solubility in water: Negligible.
Physical state and appearance: Solid.
Odor: Odorless
Taste: Not available.
Molecular Weight: Not applicable.
Color: Tan.
pH (1% soln/water): Basic.
Boiling Point: Not available.
Melting Point: Not available
Critical Temperature: Not available.
Specific Gravity: Weighted average: Not available
Vapor Pressure: Not applicable.
Vapor Density: Not available.
Volatility: Not available.
Odor Threshold: Not available.
Water/Oil Dist. Coeff.: The product is insoluble in water and oil.
Ionicity (in Water): Not available.

10. Stability and Reactivity

Stability: This material is stable.
Conditions to avoid: None.
Materials to avoid: Ammonia may be released on contact with strong bases.
Hazardous decomposition products: Ammonia, nitrogen oxides.

11. Toxicological Information

Acute Data: When tested for primary irritation potential, similar materials caused mild eye irritation and were slightly irritating or non-irritating to the skin. Human experience with similar materials indicates that prolonged or repeated contact may dry skin and cause irritation. This material has not been tested for acute inhalation toxicity. It contains fine particles which can cause respiratory irritation. The acute oral toxicity of this material has not been tested. There are currently no reports of human toxicity for ingested zeolite.
Subchronic Data: This material has not been tested for subchronic toxicity potential.
Special Studies: This material has not been tested for chronic inhalation toxicity. Zeolite Beta is not listed by NTP, IARC, or OSHA as a carcinogen.
12. Ecological Information

Ecotoxicity: Not available.
BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

13. Disposal Considerations

Classification: This material is not RCRA Hazardous waste.
Disposal Method: Dispose in accordance with federal, state and local regulations.

14. Transport Information

DOT UN Status: This material is not regulated hazardous material for transportation.

15. Regulatory Information

CERCLA: See section 6.
SARA TITLE III: This material is not a listed Toxic Chemical subject to the reporting requirements of SARA Title III §313 and 40 C.F.R. Part 372. Hazard

Categories under SARA Title III §§311/312: Acute.

TSCA: All ingredients of this material are listed on the TSCA inventory.

16. Other Information

None.

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