SAFETY DATA SHEET

Nano H-ZSM-5

ACS Material Molecular Sieve Nano H-ZSM-5 · Version 1.4 / EN · Revision Date: 10/27/2026

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ACS MATERIAL, LLC

959 E Walnut St., Suite 100

Pasadena, CA 91106, USA

Phone +1 (866) 227-0656

Fax +1 (781) 518-0284

contact@acsmaterial.com

Revision Date **10/27/2026**

SECTION 1

Identification of the Product and of the Company

1.1 Product identifiers

Product Name : ACS Material Molecular Sieve Nano H-ZSM-5

Brand : ACS Material LLC

CAS-No. : 1318-02-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacturing of substances

Restrictions on use : No data available

1.3 Details of the supplier of the safety data sheet

Company : ACS MATERIAL LLC

959 E Walnut Street, Suite 100, Pasadena, CA 91106, USA

Telephone : +1 (866)-227-0656

Fax : +1 (781)-518-0284

1.4 Emergency telephone number

Emergency Phone # : +1 (866)-227-0656

SECTION 2

Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ eye protection/ face protection.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

SECTION 3

Composition / Information on Ingredients

3.1 Substances

Chemical name : Zeolite ZSM-5 (MFI framework), H-form

Common name and synonyms : Nano H-ZSM-5; molecular sieve ZSM-5; zeolite ZSM-5

CAS number : 1318-02-1

Chemical characterization : Zeolite, crystalline, synthetic, non-fibrous.

Information on impurities and stabilizing additives (constituents) that contribute to hazard classification: No data available.

SECTION 4

First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5

Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

No data available

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6

Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7

Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8

Exposure Controls / Personal Protection

8.1 Control parameters

Airborne dust

OSHA permissible exposure limits for particulates not otherwise regulated (PNOR), where applicable:

8-hour TWA: 15 mg/m3 (total dust); 5 mg/m3 (respirable fraction).

These general dust limits do not replace applicable substance-specific exposure limits.

8.2 Exposure controls

Appropriate engineering controls

Use local exhaust ventilation or enclosed handling to minimize airborne dust. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

8.3 Personal protective equipment

Eye/face protection

Wear eye protection suitable for dust exposure and compliant with 29 CFR 1910.133.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Impervious clothing recommended. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where respiratory protection is required, use a NIOSH-approved respirator selected for the identified airborne contaminants and exposure levels in accordance with 29 CFR 1910.134.

Control of environmental exposure

Do not let product enter drains.

SECTION 9

Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Physical state: Solid. Form: Powder. Colour: No data available.
b) Odour	No data available
c) Odour threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Relative vapor density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Kinematic viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available
u) Particle characteristics	No data available

9.2 Other safety information

No data available

SECTION 10

Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

Strong acids; strong bases; hydrogen fluoride; chlorine trifluoride; ethylene oxide; halogenated hydrocarbons; oxygen difluoride; sodium nitrate; vinyl compounds; strong oxidizing agents.

10.6 Hazardous decomposition products

Other decomposition products — No data available. In the event of fire: see section 5.

SECTION 11

Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Oral: No product-specific test data available.

Dermal: No product-specific test data available.

Inhalation: No product-specific test data available.

Skin corrosion/irritation

No product-specific test data available.

Serious eye damage/eye irritation

Causes serious eye irritation (Eye Irrit. 2A, H319).

No product-specific test data available.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No product-specific test data available.

Carcinogenicity

No product-specific carcinogenicity test data are available.

IARC Monographs Volume 68 (1997) evaluated synthetic zeolites within the category "Zeolites other than erionite" as Group 3 (not classifiable as to their carcinogenicity to humans). This is a class-level evaluation and is not a product-specific carcinogenicity determination.

NTP listing status: No data available for the complete product.

OSHA carcinogen status: No data available for the complete product.

Reproductive toxicity

No data available

Specific target organ toxicity — single exposure

May cause respiratory irritation (STOT SE 3, H335).

Specific target organ toxicity — repeated exposure

No product-specific repeated-exposure toxicity test data available.

Aspiration hazard

No data available

Additional information

Causes serious eye irritation. Inhalation of dust may cause respiratory irritation.

Cough, difficulty in breathing, gastrointestinal disturbance; prolonged or repeated exposure can cause damage to the lungs.

SECTION 12

Ecological Information

12.1 Toxicity

No product-specific ecotoxicity data available.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available

SECTION 13

Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable material to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14

Transport Information

14.1 DOT (US) : Not dangerous goods

14.2 IMDG : Not dangerous goods

14.3 IATA : Not dangerous goods

SECTION 15

Regulatory Information

15.1 Safety, health and environmental regulations specific to the substance or mixture

SARA 311/312 hazard information (based on Section 2)

Serious eye damage/eye irritation: Eye irritation, Category 2A.

Specific target organ toxicity (single exposure): Category 3 (respiratory tract irritation).

SECTION 16

Other Information

Full text of hazard statements referred to in Section 2.

Eye Irrit.	Eye irritation
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
STOT SE	Specific target organ toxicity - single exposure

Revision summary (1.4, 10/27/2026): Reformatted to the current ACS Material layout. Product identification and composition information clarified. First-aid measures, storage instructions, exposure controls, physical and chemical properties, toxicological information, ecological information and regulatory information revised. Legacy numerical toxicity values and test-result statements removed. HMIS and NFPA ratings removed. Hazard classes and categories in Section 2 remain unchanged.

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