SAFETY DATA SHEET

ZIF-8

ACS Material Zeolitic Imidazolate Framework-8 (ZIF-8) · Version 1.3 / EN · Revision Date: 10/27/2026

CONTENTS

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Revision Date **10/27/2026**

SECTION 1

Identification of the Product and of the Company

1.1 Product identifiers

Product Name : ACS Material Zeolitic Imidazolate Framework-8 (ZIF-8)

Brand : ACS Material LLC

CAS-No. : 59061-53-9

Product Number : MMZ8A005 (5 g)

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

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Category 1B), H314

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 : Danger

Hazard statement(s)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)

P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

No data available

SECTION 3

Composition / Information on Ingredients

3.1 Substances

Substance name : ACS Material Zeolitic Imidazolate Framework-8 (ZIF-8)

Synonyms : 2-Methylimidazole zinc salt; ZIF-8; metal–organic framework (MOF), zeolitic imidazolate framework (ZIF)

Formula : C8H10N4Zn

Molecular weight : 227.58 g/mol

CAS number : 59061-53-9

Chemical characterization : Metal–organic framework (zinc 2-methylimidazolate); not an aluminosilicate zeolite.

Concentration : ≤100%

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

No data available

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

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

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

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 and face protection suitable for corrosive 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. Color: White.
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

No data available

10.5 Incompatible materials

Strong acids, strong oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions — carbon oxides, nitrogen oxides (NOx), zinc/zinc oxides. 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

Causes severe skin burns (Skin Corr. 1B, H314). No product-specific test data available.

Serious eye damage/eye irritation

Causes serious eye damage (as part of H314). 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.

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

No data available

Specific target organ toxicity — repeated exposure

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

Aspiration hazard

No data available

Additional information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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 solutions 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 UN number : ADR/RID: 3263; IMDG: 3263; IATA: 3263

14.2 UN proper shipping name : ADR/RID and IMDG: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (2-Methylimidazole zinc salt). IATA: Corrosive solid, basic, organic, n.o.s. (2-Methylimidazole zinc salt)

14.3 Transport hazard class(es) : ADR/RID: 8; IMDG: 8; IATA: 8

14.4 Packaging group : ADR/RID: III; IMDG: III; IATA: III

14.5 Environmental hazards : ADR/RID: no; IMDG Marine pollutant: no; IATA: no

14.6 Special precautions for user : No data available

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)

Acute toxicity (any route of exposure): Category 4 (oral).

Skin corrosion or irritation: Category 1B.

SECTION 16

Other Information

Full text of hazard statements referred to in Section 2.

Acute Tox.	Acute toxicity
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
Skin Corr.	Skin corrosion

Revision summary (1.3, 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. Section 2 hazard classes, categories and label elements unchanged; precautionary statements kept as in the previous version.

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