

Section 1 – Product and Company Information

Product Name 1,1'-Azobis(cyclohexanecarbonitrile), 98%
Product Number 380210
Brand Aldrich Chemical

Company Sigma-Aldrich
Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 – Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS#</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
1,1'-AZOBIS(CYCLOHEXANECARBONITRILE)	2094-98-6	No	218-254-8	

Formula C14H20N4
Synonyms

Section 3 – Hazards Identification**Emergency Overview**

Flammable (USA) Highly Flammable (EU) Irritant
Irritating to eyes, respiratory system and skin.

HMIS Rating

Health: 2 Flammability: 2 Reactivity: 1

NFPA Rating

Health: 2 Flammability: 2 Reactivity: 1

For additional information on toxicity, please refer to Section 11.

Section 4 – First Aid Measures**Oral Exposure**

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Asser adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 – Fire Fighting Measures

Flammable Hazards Yes

Explosion Hazards

Container explosion may occur under fire conditions.

Explosion Data

Dust Potential

This material, like most materials in powder form, is capable of creating a dust explosion.

Autoignition Temp: N/A

Flammability: Yes

Extinguishing Media

Suitable

Use approved class D extinguishers or smother with dry sand, dry ground limestone, or dry clay.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazards

Flammable solid. Emits toxic fumes under fire conditions.

Section 6 – Accidental Release Measures

Procedure to be Followed in case of Leak or Spill

Evacuate area. Shut off all sources of ignition. Use non-sparking tools.

Procedures of Personal Precautions

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Avoid raising dust. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Handling

User Exposure

Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep container closed. Keep away from heat, sparks, and open flames. Store at 2-8°C

Special Requirements

Vent periodically. May develop pressure. Open carefully.

Section 8 – Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Use non-sparking tools. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N100 9US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use full face supplied air respirator.

Hand

Compatible chemical resistant gloves

Eye

Chemical safety goggles.

General Hygiene Measures

Wash thoroughly after handling.

Section 9 – Physical/Chemical Properties

Appearance

Physical State	Color	Form
	Very faintly beige	Fine crystals

Molecular Weight	244.34 AMU
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Ph	N/A
BP/BP Range	N/A
MP/MP Range	114°C
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point *F	N/A
Flash Point *C	N/A

Explosion Limits	N/A
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Flammability	N/A
Autoignition Temp.	N/A
Solubility	N/A

N/A = not available

Section 10 – Stability and Reactivity

Stability**Stable**

Stable.

Conditions of Instability

Exothermic decomposition commences above 114°C

Conditions to Avoid

Heat.

Materials to Avoid

Strong oxidizing agents

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Nitrogen oxides

Hazardous Polymerization

Will not occur.

Section 11 – Toxicological Information

Route of Exposure**Skin Contact**

Causes skin burns

Skin Absorption

May be harmful if absorbed through the skin.

Eye contact

Causes eye irritation.

Inhalation

Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion

May be harmful if swallowed.

Signs and Symptoms of Exposure

Prolonged exposure can cause: Nausea, headache, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: N/A

Section 12 – Ecological Information

No Data Available

Section 13 – Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 – Transport Information

DOT

Proper Shipping Name: Self-reactive solid type D

UN#: 3226

Class: 4.1

Packing Group: Packing Group II

Hazard Label: Flammable solid

PIH: not PIH

IATA

Proper Shipping Name: Self-reactive solid type D

IATA UN Number: 3226

Hazard Class: 4.1

Section 15 – Regulatory Information

EU Additional Classification

Symbol of Danger: F Xi

Indication of Danger

Highly Flammable. Irritant.

Risk Statements R: 11 36/37/38

Highly flammable. Irritating to eyes, respiratory system and skin.

Safety Statements S: 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU) Irritant.

Risk Statements

Irritating to eyes, respiratory system and skin.

Safety Statements

Keep away from sources of ignition -no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: Yes

Section 16 – Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling of or contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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