

SAFETY DATA SHEET

AMVN

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 06/03/2010
Supersedes Revision: 04/20/2010

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 82225
Product Name: AMVN
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com
Synonyms: 2,2'-Azobis(2,4-dimethylvaleronitrile); 2,2'-azodi(2,4-dimethylvaleronitrile);
2,2'-Azobis(2,4-dimethylpentanenitrile)

2. Hazards Identification

Emergency Overview: Combustible.
Avoid contact and inhalation.
Risk of explosion if heated under confinement.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Causes eye, skin, or respiratory system irritation.
Harmful by inhalation, ingestion, or skin absorption.
Material is irritating to the mucous membranes and upper respiratory tract.
The toxicological properties of this product have not been fully evaluated.
Signs and Symptoms Of Exposure: No data available.
Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

| Hazardous Components (Chemical Name) | CAS # | Concentration | EC# | Risk Phrases |
|--------------------------------------|-----------|---------------|-----------|--------------|
| 1. AMVN | 4419-11-8 | 100.0 % | 224-583-8 | |

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

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5. Fire Fighting Measures

| | | | |
|--|---|---------------|--|
| Flash Pt: | No data. | | |
| Explosive Limits: | LEL: No data. | UEL: No data. | |
| Autoignition Pt: | No data available. | | |
| Fire Fighting Instructions: | As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. | | |
| Flammable Properties and Hazards: | Container explosion may occur under fire conditions. Dust forms an explosive mixture with air. Emits toxic fumes under fire conditions. Sensitive to static discharge. | | |
| Hazardous Combustion Products: | No data available. | | |
| Suitable Extinguishing Media: | Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. | | |
| Unsuitable Extinguishing Media: | A solid water stream may be inefficient. | | |

6. Accidental Release Measures

| | | | |
|---|--|--|--|
| Steps To Be Taken In Case Material Is Released Or Spilled: | Avoid release into the environment. Avoid raising and breathing dust, and provide adequate ventilation. Remove all sources of ignition. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Transfer to a proper chemical waste container for disposal. | | |
|---|--|--|--|

7. Handling and Storage

| | | | |
|---|---|--|--|
| Hazard Label Information: | Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling | | |
| Precautions To Be Taken in Handling: | Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure. | | |
| Precautions To Be Taken in Storing: | Protect from sunlight and store in well-ventilated place. Store at correct temperature, not to exceed 10 °C= 50 °F. | | |
| Other Precautions: | Prevent the build up of electrostatic charge. | | |

8. Exposure Controls/Personal Protection

| Hazardous Components (Chemical Name) | CAS # | OSHA PEL | ACGIH TLV | Other Limits |
|---|--|----------|-----------|--------------|
| 1. AMVN | 4419-11-8 | No data. | No data. | No data. |
| Protective Equipment Summary - Hazard Label Information: | Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood | | | |
| Respiratory Equipment (Specify Type): | NIOSH approved respirator, as conditions warrant. | | | |
| Eye Protection: | Safety glasses | | | |
| Protective Gloves: | Compatible chemical-resistant gloves | | | |
| Other Protective Clothing: | Lab coat | | | |
| Engineering Controls (Ventilation etc.): | Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. | | | |
| Work/Hygienic/Maintenance Practices: | Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling. | | | |

9. Physical and Chemical Properties

Physical States: Gas Liquid Solid

Melting Point: No data.

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data.

Specific Gravity (Water = 1): No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Evaporation Rate (vs Butyl Acetate=1): No data.

Solubility in Water: No data.

Solubility Notes: ~0.2 mg/ml in 1:4 DMSO:PBS (pH 7.2); ~20 mg/ml in EtOH, DMF, & DMSO;

Percent Volatile: No data.

Formula: C₁₄H₂₄N₄

Molecular Weight: 248.40

Appearance and Odor: A crystalline solid

10. Stability and Reactivity

Stability: Unstable Stable

Conditions To Avoid - Instability: electrostatic charge
friction
heat, flames, and sparks
pressure
shock
sunlight

Incompatibility - Materials To Avoid: oxidizing agents
strong acids

Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide
cyanide compounds
hydrogen cyanide
nitrogen gas
nitrogen oxides

Possibility of Hazardous Reactions: Will occur Will not occur

Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

The toxicological effects of this product have not been thoroughly studied.

Toxicity Data: LD50(oral,mouse): >8 g/kg; LD50(oral,rat): >6 g/kg;

Chronic Toxicological Effects: No data available.

| Hazardous Components (Chemical Name) | CAS # | NTP | IARC | ACGIH | OSHA |
|--------------------------------------|-----------|------|------|-------|------|
| 1. AMVN | 4419-11-8 | n.a. | n.a. | n.a. | n.a. |

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12. Ecological Information

Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Self-reactive solid type D, Temperature controlled (2,2'-Azodi-(2,4-dimethylvaleronitrile))
DOT Hazard Class: 4.1
DOT Hazard Label: FLAMMABLE SOLID
UN/NA Number: 3236
Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Self-reactive solid type D, Temperature controlled (2,2'-Azodi-(2,4-dimethylvaleronitrile))
UN Number: 3236
Hazard Class: N.A.
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Self-reactive solid type D, Temperature controlled (2,2'-Azodi-(2,4-dimethylvaleronitrile))
UN Number: 3236
Hazard Class: N.A.
Packing Group: II
IATA Classification: 4.1

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

- R5 - Heating may cause an explosion.
- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R44 - Risk of explosion if heated under confinement.
- S24/25 - Avoid contact with skin and eyes.
- S37/39 - Wear suitable gloves and eye/face protection.
- S47 - Keep at temperature not exceeding 10 °C.

US EPA SARA Title III

| Hazardous Components (Chemical Name) | CAS # | Sec.302 (EHS) | Sec.304 RQ | Sec.313 (TRI) | Sec.110 |
|--------------------------------------|-----------|---------------|------------|---------------|---------|
| 1. AMVN | 4419-11-8 | No | No | Yes-Cat. N106 | No |

Other US EPA or State Lists

| Hazardous Components (Chemical Name) | CAS # | CAA HAP,ODC | CWA NPDES | TSCA | CA PROP.65 |
|--------------------------------------|-----------|-------------|-----------|-----------|------------|
| 1. AMVN | 4419-11-8 | No | No | Inventory | No |

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary use.
DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.