

SAFETY DATA SHEET

Activator 4322

SECTION 1: IDENTIFICATION

1.1. Product identifier

Trade name: Activator 4322
Product no.: MS-4322

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

Relevant identified uses of the substance or mixture: Catalyst, Initiator
Restricted to professional users.
Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Hernon Manufacturing Inc**
121 Tech Drive
FL 32771 Sanford
USA
T: +1-407-322-4000
www.hernon.com

Contact person: Hernon SDS Coordinator
E-mail: customerservice@hernon.com

SDS date: 8/13/2024

SDS Version: 2.0

Date of previous version: 8/13/2024 (1.0)

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webpoisoncontrol (trriage.webpoisoncontrol.org) to get specific guidance for your case.

VelocityEHS:

+1-800-255-3924 (USA)

+1-813-248-0585 (International)

1-300-954-583 (Australia)

0-800-591-6042 (Brazil)

400-120-0751 (China)

000-800-100-4086 (India)

800-099-0731 (Mexico)

Contract #: (MIS0002665)

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. ▼ Classification of the substance or mixture

Self-react. D; H242, Heating may cause a fire.
Acute Tox. 4; H302, Harmful if swallowed.
Skin Sens. 1; H317, May cause an allergic skin reaction.
Acute Tox. 4; H332, Harmful if inhaled.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Danger

▼ Hazard statement(s):

Heating may cause a fire. (H242)
Harmful if swallowed or if inhaled. (H302+H332)
May cause an allergic skin reaction. (H317)

Precautionary statement(s):

General:

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▼ Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
Keep only in original packaging. (P234)
Avoid breathing dust. (P261)
Wash hands and exposed skin thoroughly after handling. (P264)
Use only outdoors or in a well-ventilated area. (P271)
Contaminated work clothing should not be allowed out of the workplace. (P272)
Wear eye protection/protective clothing. (P280)

▼ Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340)
Call a POISON CENTER/doctor if you feel unwell. (P312)
If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
Take off contaminated clothing and wash it before reuse. (P362+P364)
In case of fire: Use water mist/carbon dioxide/alcohol-resistant foam to extinguish. (P370+P378)

Storage:

Store in a well-ventilated place. Keep cool. (P403+P235)
Protect from sunlight. (P410)
Store at temperatures not exceeding . (P411)
Store separately. (P420)

Disposal:

Dispose of contents/container in accordance with local regulation
(P501)

Additional labelling:

Not applicable.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2,2'-azobis[2,4-dimethylvaleronitrile]	CAS No.: 4419-11-8	30-60%	Self-react. D, H242	
2,2'-dimethyl-2,2'-azodipropiononitrile	CAS No.: 78-67-1	30-60%	Self-react. C, H242 Acute Tox. 4, H302 Acute Tox. 4, H332	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

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SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

General information:

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact:

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

Eye contact:

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion:

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

Burns:

Rinse with water until pain stops then continue to rinse for 30 minutes.

4.2. ▼ Most important symptoms and effects, both acute and delayed

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Call a POISON CENTER/doctor if you feel unwell.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. ▼ Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material: Always store in containers of the same material as the original container.

Storage conditions: < 10°C

Incompatible materials: Strong oxidizing agents
Reducing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)

8.2. Exposure controls

Apply general control to prevent unnecessary exposure

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures: Ground and bond container and receiving equipment.
Apply standard precautions during use of the product.
Avoid inhalation of gas or dust.

Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure: No specific requirements.

Individual protection measures, such as personal protective equipment


Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment:

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance

with current local regulations.


Skin protection:

Recommended	Type/Category	Standards	
-	Protective Clothing		

Hand protection:

Nitrile Rubber

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Solid
<i>Colour:</i>	White
<i>Odour:</i>	None
<i>Odour threshold (ppm):</i>	Testing not relevant or not possible due to the nature of the product.
<i>pH:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Density (g/cm³):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Kinematic viscosity:</i>	Does not apply to solids.
<i>Particle characteristics:</i>	Testing not relevant or not possible due to the nature of the product.

Phase changes

<i>Melting point (°F):</i>	>122
<i>Melting point (°C):</i>	>50
<i>Softening point/range (°F):</i>	Does not apply to solids.
<i>Boiling point (°F):</i>	Does not apply to solids.
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Does not apply to solids.
<i>Decomposition temperature (°F):</i>	Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

<i>Flash point (°F):</i>	Does not apply to solids.
<i>Flammability (°F):</i>	The material is ignitable.

<i>Auto-ignition temperature (°F):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Explosion limits (% v/v):</i>	Does not apply to solids.

Solubility

<i>Solubility in water:</i>	Testing not relevant or not possible due to the nature of the product.
<i>n-octanol/water coefficient (LogKow):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat (g/L):</i>	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

<i>Self-accelerating decomposition temperature (SADT) (°C):</i>	≥25
<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	Testing not relevant or not possible due to the nature of the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Incompatible Materials

10.5. Incompatible materials

Strong oxidizing agents
Reducing agents

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.
Harmful if inhaled.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Long term effects

None known.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)



None of the components are listed

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN3236	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED (2,2'-azobis[2,4- dimethylvaleronitrile])	Transport hazard class: 4.1 Label: 4.1 Classification code: SR2 	-	No	Limited quantities: 0 Tunnel restriction code: (D) See below for additional information.
IMDG	UN3236	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED (2,2'-azobis[2,4- dimethylvaleronitrile])	Transport hazard class: 4.1 Label: 4.1 Classification code: SR2 	-	No	Limited quantities: 0 EmS: F-F S-K See below for additional information.
IATA	Forbidden	Forbidden		-	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance

or mixture

15.2. U.S. Federal regulations

<i>TSCA (the non-confidential portion):</i>	2,2'-azobis[2,4-dimethylvaleronitrile] is listed 2,2'-dimethyl-2,2'-azodipropiononitrile is listed
<i>Clean Air Act:</i>	None of the components are listed
<i>EPCRA Section 302:</i>	None of the components are listed
<i>EPCRA Section 304:</i>	None of the components are listed
<i>EPCRA section 313:</i>	None of the components are listed
<i>CERCLA:</i>	None of the components are listed

State regulations

<i>California / Prop. 65:</i>	None of the components are listed
<i>Massachusetts / Right To Know Act:</i>	2,2'-dimethyl-2,2'-azodipropiononitrile is listed
<i>New Jersey / Right To Know Act:</i>	2,2'-dimethyl-2,2'-azodipropiononitrile / Substance number: 0179 2,2'-dimethyl-2,2'-azodipropiononitrile is on the Special Health Hazard Substance List
<i>New York / Right To Know Act:</i>	— 2,2'-dimethyl-2,2'-azodipropiononitrile is listed 2,2'-dimethyl-2,2'-azodipropiononitrile is regulated with a Threshold Reporting Quantity (TRQ) of: 1 pounds
<i>Pennsylvania / Right To Know Act:</i>	— 2,2'-dimethyl-2,2'-azodipropiononitrile is listed

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

H242, Heating may cause a fire.
H302, Harmful if swallowed.
H332, Harmful if inhaled.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

SDS Coordinator

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.
Country-language: US-en