

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	Spermine NONOate
Product #:	S-1010
Synonyms:	(Z)-1-[N-[3-aminopropyl]-N-[4-(3-aminopropylammonio)butyl]-amino]diazene-1-ium-1,2-diolate
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Spermine NONOate	136587-13-8	-	≥98

Section 3: Hazards Identification

Symbols	N/A
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HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
0		0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
0	0	0

Section 4: First Aid Measures

General Overview:	No special measures required.
Inhalation:	Supply fresh air; consult doctor in case of complaints.
Skin:	Generally, the product does not irritate the skin.
Eyes:	Rinse opened eyes for several minutes under running water.
Ingestion:	If symptoms persist consult doctor.

See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Product is not flammable.
Extinguishing Media:	Use firefighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No further relevant information available.
Special Fire Fighting Procedures:	No special measures required.
Flash Point:	No data available

Section 6: Accidental Release Measures

Personal Precautions:	Not required.
Environmental Precautions:	Do not allow to enter sewers/surface or ground water.
Methods for Clean-up:	Pick up mechanically.

SECTION 7: Handling & Storage

Storage:	Recommended storage temperature: -80°C
Handling:	No special measures required.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 Not required.
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Skin and Body:	  Protective gloves and lab coat.
Eyes:	 Not required.
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Follow standard good industrial hygiene practices.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Crystalline. Characteristic odor.
Formula	$C_{10}H_{26}N_6O_2$
Molecular Wt.	262.4
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	Aqueous buffers: 100 mg/ml
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	No decomposition if used according to specifications.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides

Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No further relevant information available

SECTION 11: Toxicological Information

RTECS#:	TX6890000
ACUTE Toxicity:	N/A
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by AGGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA. EPA: No classification on carcinogenic data is available from EPA

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	No data available

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Smaller quantities can be disposed of with household waste.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	N/A
ADR / RID (LAND):	Not regulated
DOT regulations:	Not regulated
IMDG/IMO (SEA):	Not regulated
IATA/DGR (AIR):	Not regulated
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	Not hazardous
Risk Phrases:	N/A
Safety Phrases:	N/A
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found
U.S. Federal Regulations:	SARA 302/304 emergency planning and notification: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found. SARA 313 toxic chemicals notification and release reporting: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: N/A
WHMIS (Canada):	N/A

SECTION 16: Other Information

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