

# SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

## 1. Identification

**Product identifier:** MetAMINO®

**Chemical name:**  
DL-Methionine

**Other means of identification**

**CAS Number:** 59-51-8

**Recommended restrictions**

**Recommended use:** Feed additive

**Restrictions on use:** Not known.

**Manufacturer/Importer/Distributor Information**

Company Name : Evonik Corporation  
299 Jefferson Road  
Parsippany, NJ 07054  
USA

Telephone : +1 973 929 8000

Fax : +1 973 929 8040

E-mail : product-regulatory-services@evonik.com

**Emergency telephone number:**

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency : +1 800 681 9531 (CHEMTREC MEXICO)

+1 703 527 3887 (CHEMTREC WORLD)

## 2. Hazard(s) identification

**Hazard Classification**

Not classified

**Label Elements**

**Hazard Symbol:** No symbol

**Signal Word:** No signal word.

**Hazard Statement:** Not applicable

**Precautionary Statements**

**Hazard(s) not otherwise classified (HNOC):**

May form combustible dust concentrations in air (during processing).

### 3. Composition/information on ingredients

**Chemical name:**

DL-Methionine

#### Substances

Chemical Identity	CAS number	Content in percent (%) <sup>*</sup>
DL-Methionine	59-51-8	>=99%

<sup>\*</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Description of necessary first-aid measures

**General information:**

Pay attention to self-protection. Remove victims from hazardous area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered. Do not leave victims unattended. If the casualty is unconscious: Place the victim in the recovery position.

**Inhalation:**

Inhalation is possible if aerosols, mists, dusts, or smoke form. Move victims into fresh air. With labored breathing: Provide with oxygen. Consult a doctor. If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.

**Skin Contact:**

Wash off affected area immediately with plenty of water for at least 15 minutes. If symptoms persist, consult a physician for treatment.

**Eye contact:**

With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. In case of persistent discomfort: Consult an ophthalmologist.

**Ingestion:**

Rinse mouth. Immediately give large quantities of water to drink. Obtain medical attention.

**Personal Protection for First-aid Responders:**

In the event of fire, wear self-contained breathing apparatus.

#### Most important symptoms/effects, acute and delayed

**Symptoms:**

None known.

**Hazards:**

Other dangerous properties can not be excluded.

#### Indication of immediate medical attention and special treatment needed

**Treatment:**

This substance does not have any noteworthy noxious potential. Damage to health is thus not expected.

### 5. Fire-fighting measures

### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Water, foam mist

**Unsuitable extinguishing media:** Carbon Dioxide.

**Specific hazards arising from the chemical:** May be released in case of fire: hydrocyanic acid, flammable smouldering gases, NOX, sulphur oxides, carbon monoxide, carbon dioxide.

### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities. Fire residues should be disposed of in accordance with the regulations.

**Special protective equipment for fire-fighters:** In the event of fire, wear self-contained breathing apparatus.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep unauthorized personnel away.

**Methods and material for containment and cleaning up:** Absorb mechanically avoiding production of dust.

**Environmental Precautions:** Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

## 7. Handling and storage

### Handling

**Technical measures (e.g. Local and general ventilation):** Use process enclosures, local exhaust ventilation or other engineering controls to control airborne exposure. Take measures to prevent the build up of electrostatic charge.

**Safe handling advice:** Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. Handle in accordance with good industrial hygiene and safety practice.

**Contact avoidance measures:** No data available.

**Hygiene measures:** Wash face and/or hands before break and end of work. Cleanse and apply cream to skin after work.

### Storage

**Safe storage conditions:** Store in a cool and shaded area. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Take precautionary measures against static charges, keep away from sources of ignition. Avoid dust formation. COMBUSTIBLE.

**Safe packaging materials:** No data available.

## 8. Exposure controls/personal protection

**Control Parameters**
**Occupational Exposure Limits**

None of the components have assigned exposure limits.

**Appropriate Engineering Controls**

Use process enclosures, local exhaust ventilation or other engineering controls to control airborne exposure. Take measures to prevent the build up of electrostatic charge.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection:** Safety glasses with side-shields If dust occurs: basket-shaped glasses

**Skin Protection**
**Hand Protection:**

Material: Nitrile.  
 Break-through time: 8 h  
 Guideline: DIN EN 374  
 Material: Natural rubber.  
 Break-through time: 8 h  
 Guideline: DIN EN 374  
 Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.

**Skin and Body Protection:**

No special protective equipment required.

**Respiratory Protection:**

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

**Hygiene measures:**

Wash face and/or hands before break and end of work. Cleanse and apply cream to skin after work.

**9. Physical and chemical properties**
**Appearance**

<b>Physical state:</b>	solid
<b>Form:</b>	solid
<b>Color:</b>	white to light brown
<b>Odor:</b>	Characteristic
<b>Odor Threshold:</b>	< 1 ppb
<b>pH:</b>	5.6 - 6.1 (10 g/l, 25 °C)
<b>Melting Point:</b>	281 °C
<b>Boiling Point:</b>	Not applicable
<b>Flash Point:</b>	Not applicable solid
<b>Evaporation Rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Not classified as a flammability hazard

<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	Minimum explosive concentration: 30g/m <sup>3</sup>
<b>Vapor pressure:</b>	< 0.0000001 hPa (calculated) Modified Grain Method
<b>Vapor density (air=1):</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	

<b>Solubility in Water:</b>	33.5 g/l (25 °C) pure substance
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	-1.87 pure substance
<b>Self Ignition Temperature:</b>	> 150 °C (VDI 2263-1) in 8l wire basket
<b>Decomposition Temperature:</b>	215 °C (TG (thermal gravimetric analysis))
<b>Kinematic viscosity:</b>	No data available.
<b>Dynamic viscosity:</b>	Not applicable Solid
<b>Other information</b>	
<b>Bulk density:</b>	610 - 750 kg/m <sup>3</sup>
<b>Explosive properties:</b>	Dusts of the product are explosible.
<b>Oxidizing properties:</b>	Not to be expected in view of the structure
<b>Dust Explosion Description Number Kst:</b>	85 m.b./s
<b>Minimum ignition energy:</b>	> 10 mJ (VDI Guideline 2263 sheet 1) sieve fraction without inductance
<b>Minimum ignition temperature:</b>	330 °C (VDI Guideline 2263 sheet 1) (BAM-furnace) Standard commercial product with characteristic grain size distribution is normally flammable.
<b>Metal Corrosion:</b>	No data available.
<b>Dust explosion properties:</b>	St1 ST-1
<b>Burning Rate:</b>	1,200 s
<b>Burning Number:</b>	Burning Number: 5 VDI 2263 BZ 5 - burns out with flames or shower of sparks.

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions:</b>	Dust can form an explosive mixture in air.
<b>Conditions to avoid:</b>	See chapter Conditions for safe storage, including any incompatibilities
<b>Incompatible Materials:</b>	No further information available
<b>Hazardous Decomposition Products:</b>	No further information available

## 11. Toxicological information

**General information:** gastro-intestinal symptoms: nausea, vomiting Side-effects were observed in the event of higher dosage (10 g)

### Information on likely routes of exposure

<b>Inhalation:</b>	Relevant route of exposure. Information on effects are given below.
<b>Skin Contact:</b>	Relevant route of exposure. Information on effects are given below.
<b>Eye contact:</b>	Relevant route of exposure. Information on effects are given below.
<b>Ingestion:</b>	If handled correctly, not a relevant route of exposure. Information on effects are given below.

### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation:** No data available.

**Skin Contact:** No data available.

**Eye contact:** No data available.

**Ingestion:** No data available.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

##### Oral

**Product:** LD 50 (Rat): > 10,000 mg/kg

##### Dermal

**Product:** Not classified for acute toxicity based on available data.

##### Inhalation

**Product:** LC0 (Rat): 5.25 mg/l

#### Repeated dose toxicity

**Product:** NOAEL (Rat(male), Oral): 1,253 mg/kg  
NOAEL (Rat(female), Oral): 1,423 mg/kg

#### Skin Corrosion/Irritation

**Product:** Not irritating OECD Test Guideline 404 (Rabbit): Not irritating

#### Serious Eye Damage/Eye Irritation

**Product:** slightly eye irritation Rabbit: slightly eye irritation

#### Respiratory or Skin Sensitization

**Product:** , OECD Test Guideline 406 (Guinea Pig)Not a skin sensitizer.

#### Carcinogenicity

**Product:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

#### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogens present or none present in regulated quantities

#### Germ Cell Mutagenicity

##### In vitro

**Product:** (literature)none mutagenic / genotoxic effects  
Ames test (OECD Test Guideline 471): negative

##### In vivo

**Product:** No data available.

#### Reproductive toxicity

**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**  
Product: No data available.

**Specific Target Organ Toxicity - Repeated Exposure**  
Product: No data available.

**Aspiration Hazard**  
Product: No data available.

**Other effects:** No data available.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

Product: LC 50 ((Brachydanio rerio), 96 h): > 3,200 mg/l  
NOEC ((Brachydanio rerio), 96 h): 3,200 mg/l

##### Aquatic Invertebrates

Product: NOEC (Daphnia magna, 48 h): 220 mg/l  
EC 50 (Daphnia magna, 48 h): 324 mg/l

#### Chronic hazards to the aquatic environment:

##### Fish

Product: No data available.

##### Aquatic Invertebrates

Product: No data available.

##### Toxicity to Aquatic Plants

Product: EC 50 (Desmodesmus subspicatus, 72 h): > 1,000 mg/l  
EC 50 (Desmodesmus subspicatus, 72 h): > 1,000 mg/l

### Persistence and Degradability

#### Biodegradation

Product: No data available.

#### BOD/COD Ratio

Product: No data available.

### Bioaccumulative potential

#### Bioconcentration Factor (BCF)

Product: low log Pow: see chapter 9

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** Log Kow: -1.87 pure substance

**Mobility in soil:** No data available.

**Components:**  
DL-Methionine No data available.

**Other adverse effects:** No further information available

**13. Disposal considerations**

**Disposal methods:** Waste must be disposed of in accordance with federal, provincial and local regulations.

**Contaminated Packaging:** Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

**14. Transport information**

**Domestic regulation**

**49 CFR**

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

**International Regulations**

**UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**15. Regulatory information**

**US Federal Regulations**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Combustible dust

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances**

**SARA 311/312 Hazardous Chemical**

**Chemical Identity**

**Threshold Planning Quantity**

None present or none present in regulated quantities.

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

**US. New Jersey Worker and Community Right-to-Know Act**

No ingredient regulated by NJ Right-to-Know Law present.

**US. Massachusetts RTK - Substance List**

No ingredient regulated by MA Right-to-Know Law present.

**US. Pennsylvania RTK - Hazardous Substances**

No ingredient regulated by PA Right-to-Know Law present.

**US. Rhode Island RTK**

No ingredient regulated by RI Right-to-Know Law present.

<b>16. Other information, including date of preparation or last revision</b>
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**HMIS Hazard ID**

<b>Health</b>	0
<b>Flammability</b>	1
<b>Physical Hazards</b>	0
<b>PERSONAL PROTECTION</b>	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**Issue Date:** 06/26/2019

**Version #:** 1.1

**Further Information:** No data available.

**Revision Information:** Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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