

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: MetAMINO 25 KG bag 1000 kg Pal: BE

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 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 (%) [*]
DL-Methionine	59-51-8	>=99%

^{*} 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

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

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

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

10. Stability and reactivity

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

Inhalation:	Relevant route of exposure. Information on effects are given below.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.
Ingestion:	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.

16. Other information, including date of preparation or last revision
--

HMIS Hazard ID

Health	0
Flammability	1
Physical Hazards	0
PERSONAL PROTECTION	

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.

Disclaimer: This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.