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L-Methionine

Product SPECIFICATION

Product Name	L-Methionine	
INCI Name	L-methionine	
EINECS Number	200-562-9	
CAS Code	63-68-3	
	neets OR exceeds: U SP	
Identification		Infrared Absorption
Specific rotation	1	+22.4° to +24.7°
рН		5.6 to 6.1
Loss on drying		not more than 0.3%
Residue on ignit	tion	not more than 0.4%
Chloride		not more than 0.05%
Sulfate		not more than 0.03%
Iron		not more than 0.003%
Heavy metals		not more than 0.0015%
Lead (as Pb)		≤ 3ppm
Cadmium		≤ 1ppm
Arsenic (as As)		≤ 1ppm
Mercury		≤ 0.1ppm
Chromatograph	ic purity	As per USP30 (By TLC)
Individual impu	rity	≤ 0.5%
Total impurity		≤ 2.0%
Organic volatile	impurities	Meets the requirements
Total Plate Count		≤ 1,000 cfu/g
Yeasts and Molds CFU/g2		≤ 100cfu/g
Escheria Coli		1g/Absent
Salmonella		25g/Absent
Staphylococcus	aureus	Absent
Assay		98.5 to 101.5%

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GENERAL PRODUCT INFORMATION			
Mesh of the product		20	
Taped denisty		0.4 g/ml	
Bulk density		0.58 g/ml	
Water solubility		About 4.8g/100ml H2O(2022	
Origin (Synthetis, Fermentation)		Fermentation	
Origin (Animal, Vegetal, etc.)		Corn	
Is the product and their ingredients FREE of GLUTEN	?	Yes	
Product is suitable for Vegans		Yes	
Product is suitable for Vegatarians		Yes	
Product is free of fructose		Yes	
Is this product suitable for food?		Yes	
Can be the product used in baby food (According to Directive 2006/141/CE)?		No	
Pharmacopoeias that product meets USP30			
Country of the raw material/s China			
Storage conditions (In the warehouse)	rehouse) Preserve in well-closed containers, drying place and avoid from light.		
Storage conditions (During the transport-Short term)	Under 25 ºC		

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IUPAC name	2-amino-4-(methylthio)butanoic acid
Molecular Formula	C5H11NO2S
Molecular mass	149.21 g/mol
Raw materials used and their function	Corn
Frequency of analysis of each contaminant?	Every batch
Frequency of analysis of microbiology?	Every batch, Every batch
Frequency of analysis of each heavy metals?	Every batch, Every batch

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Explanation about control of the foreign bodies during the manufactiring process:

Metal detector	Yes
Sieve	Yes
Filter	Yes
X-Ray	No

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In accordance with the Directive 2003/89/EC We confirm this is the ingredients and their content in %

L-Methionine 99.5%

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BSE/TSE

The product does not contain and is not derived from Specified Risk Material as defined in Commission Directive European and it is conform to the EU legislation relating to the risk of Transmission of Spongiform Encephalopathy (TSE).

GMO

Following EU regulations have been published in the Official Journal of the European Union:

- Regulation (EC) No.1829/2003 of the European Parliament and the Council of 22nd September 2003 on genetically modified food and feed

- Regulation (EC) No.1830/2003 of the European Parliament and the Council of 22nd September 2003 concerning tractability and labeling on genetically modified organisms and tractability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC.

This product has not been genetically modified so there is no obligation of GMO labeling as defined by the above mentioned regulations.

NON IRRADIATION/NON IONIZED

According to directives 1992/2/EC and 1999/3/EC, We confirm is not made from irradiated/ionized raw materials or was irradiated/ionized the product.

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PESTICIDES

To our actual knowledge of production process, raw materials and equipment used potential pesticide residues in the above mentioned product comply with the European legislation on pesticide residues, esp. Regulation (EC)None. 396/2005. However, we do no test for pesticide residues on a routine basis.

RESIDUAL SOLVENTS

The product meets with:

- DIRECTIVE 2009/32/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2009 on the approximation of the laws of the Member States on extraction solvents used in the production of foodstuffs and food ingredients - DIRECTIVE 2010/59/EU of 26 August 2010 amending Directive 2009/32/EC of the European Parliament and of the Council on the approximation of the laws of the Member States on extraction solvents used in the production of foodstuffs and food ingredients.

CONTAMINANTS

The product is in accordance and meets with the commission regulation (EC) No.629/2008 of 2 July 2008 amending regulation (EC) No.1881/2006 setting maximum levels for certain contaminants in foodstuffs.

PCBS and MELAMINE

The product is in accordance and meets with the commission regulation (EU) No.594/2012 of 5 July 2012 amending regulation (EC) No.1881/2006 as regards the maximum levels of the contaminants Ochratoxin a, non dioxin-like PCBS and melamine in foodstuffs.

ANTI-DOPING

As per the list of 2016 of the world anti-doping agency the ingredient is not a doping substance and not a combination of doping substances. The ingredient does not contain any doping substance. The ingredient does not result from a doping substance.

NANOMATERIALS

According to the the definition of 'nanomaterials' of the UE REGULATION (EU) No 1169/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011 on the provision of food information to consumers, we hereby attest that no nanomaterials are used in the formulation nor in the packaging materials of our product.

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PACKING

We confirm that the packing used is in compliance with:

- Commission Directive 2002/72/EC of 6 August 2002 relating to plastic materials and articles intended to come into contact with foodstuffs.

Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC
 Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.

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In accordance with the Directive 2003/89/EC and Council amending Directive 2000/13/EC and taking Directive 2005/26/EC, Directive 2005/63/EC and Directive 2006/142/EC of 22.12.2006 into consideration. We confirm the following information:

Note: Does the raw material CONTAIN or is it DERIVED from or could it be CROSS-CONTAMINATED by any of the following.

Cereals containing gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) and products thereof	No
Crustaceans and products thereof	No
Eggs and products thereof	No
Fish and products thereof	No
Peanuts and products thereof	No
Soybeans and products thereof	No
Milk and products thereof (including lactose)	No
Nuts (i.e. Almond, Hazelnut, Walnut, Cashew, Pecan nut, Brazil nut, Pistachio nut, Macadamia nut and Queensland nut and products thereof)	No
Celery and products thereof	No
Mustard and products thereof	No
Sesame seeds and products thereof	No
Sulphur dioxide and sulphite at concentrations of more than 10 mg/kg or 10 mg/l expressed as SO2	No
Lupine and products thereof	No
Molluscs and products thereof	No

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ALBA LIST (ALLERGENS)

When it is written 'No' means that there's no contamination in: Contain in recipe, Handled on same production line or Handled at same side. Where: 1) Contain in recipe 2) Handled on same production line 3) Handled at same side.

	Cross contamination (mg/kg)?	Where?
Cow milk protein	No	-
Lactose	No	-
Chicken egg	No	-
Soya protein	No	-
Soya oil	No	-
Gluten	No	-
Wheat	No	-
Rye	No	-
Cattle	No	-
Pork	No	-
Chicken	No	-
Fish	No	-
Shellfish and Crustaceae	No	-
Corn	No	-
Сосоа	No	-
Leguminous plants	No	-
Nuts	No	-
Nut oil	No	-
Peanut	No	-
Peanut oil	No	-
Sesame	No	-
Sesame oil	No	-
Glutamate	No	-
Sulphide (E220 to E228)	No	-
Coriander	No	-
Celery	No	-
Carrot	No	-
Lupines	No	-

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The values given are aproximate

Unit Weight 100 gram Amount Per Unit Total Fat 0 gram Saturated Fat 0 gram Trans Fat 0 gram Cholesterol 0 gram Total Carbohydrate 0 gram Dietary Fiber 0 gram Sugars 0 gram Protein 58.8 gram Sodium 0 gram Calcium 0 gram Total Calories 1000 KJ / 235KCalorie

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RESIDUE LIMITS

For the products/s mentioned above We herewith certify that the ingredient mentioned is in compliance with: commission regulation (EU) 2016/355 of 11 march 2016 amending Annex III to regulation (EC) No. 853/2004 of the European parliament and of the council as regards the specific requirements for gelatine, collagen and highly refined products of animal origin intended for human consumption.

HYGIENE OF FOODSTUFFS

For the products/s mentioned above We herewith certify that the production complies with regulation (EC) No. 852/2004 of the European parliament on the hygiene of foodstuffs and all its amendments.

FULL TRACEABILITY

For the products/s mentioned above We herewith the full traceability as mentioned in regulation (EC) No. 178/2002 of the European parliament and of the council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European food safety authority and laying down procedures in matters of food safety.

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FACTORY	ACCDEDITATION	
FACIURY	ACCREDITATION	NS/CERTIFICATIONS

ISO 9001	No
ISO 14001	No
ISO 22000	No
НАССР	Yes
GMP	Yes
FAMI QS	No
BRC	Yes

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We certify that the product has not been tested on animals for cosmetic purposes.

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MSDS (Material Safety Data Sheet)

Section 1 – Product and Company Information Product Name: L-Methionine CAS Number: 63-68-3 Synonym: L-alpha-Amino-GAMMA-methylmercaptobutyric acid Synonym: L-2-Amino-4-(methylthio)-butyric acid

Supplier Information: Productos Quimicos Gonmisol S.A. Camino de la Verneda 47-49 08930 - San Adrian del Besos Barcelona - Spain Phone +34 933136118 Fax +34 933147427 www.gonmisol.com

Section 2 – Composition/Information on Ingredients Composition Name {L-}methionine CAS # 63-68-3 % by Weight 100 Toxicological Data on Ingredients: L-methionine: ORAL (LD50): Acute: 36000 mg/kg [Rat].

Section 3 - Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4 - First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs. Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used. Serious Skin Contact: Not available. Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Serious Inhalation: Not available. Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious

person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

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Serious Ingestion: Not available.

Section 5 - Fire Fighting Measures EXTINGUISHING MEDIA Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam. SPECIAL RISKS Specific Hazard(s): Emits toxic fumes under fire conditions. SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacute through the sanitary system.

Section 7 - Handling and Storage

Precautions:

Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents. Storage:

Light Sensitive. Store in light-resistant containter Keep container tightly closed. Keep container in a cool, well-ventilated area.

Do not store above 24°C (75.2°F).

Section 8 - Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9 - Physical and Chemical Properties For this information, please, refer directly to the Certificate of Analysis OR Specifications

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Section 10 - Stability and Reactivity Stability: The product is stable. Instability Temperature: Not available. Conditions of Instability: Incompatible materials. Light Incompatibility with various substances: Reactive with oxidizing agents. Corrosivity: Not available. Special Remarks on Reactivity: Light Sensitive. Special Remarks on Corrosivity: Not available. Polymerization:Will not occur

Section 11 - Toxicological Information Routes of Entry: Inhalation. Ingestion. Toxicity to Animals: Acute oral toxicity (LD50): 36000 mg/kg [Rat]. Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/ or yeast. Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects (female fertility and fetoxicity) and birth defects (developmental abnormalities) based on animal data. No human data found at this time. May affect genetic material. [RTECS: DNA damage (Human cell), and unscheduled DNA synthesis (Human fibroblast cell)]. Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Dust may cause eye irritation. Inhalation: Dust may cause respiratory tract irritation. Ingestion: May cause gastrointestinal (digestive) tract irritation. May affect liver, blood, metabolism, behavior and respiration. The toxicological properties of this substance have not been fully investigated.

Section 12 - Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic. Special Remarks on the Products of Biodegradation: Not available.

Section 13 - Disposal Considerations Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control

Section 14 - Transport Information DOT Classification: Not a DOT controlled material (United States). Identification: Not applicable.

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Special Provisions for Transport: Not applicable.

Section 15 - Regulatory Information Federal and State Regulations: TSCA 8(b) inventory: L-methionine Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications: WHMIS (Canada): Not controlled under WHMIS (Canada). DSCL (EEC): R40- Possible risks of irreversible effects. S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. HMIS (U.S.A.): Health Hazard: 1 Fire Hazard: 1 Reactivity: 0 Personal Protection: E National Fire Protection Association (U.S.A.): Health: 1 Flammability: 1 Reactivity: 0 Specific hazard: **Protective Equipment:** Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16 - Other Information References: Not available. Other Special Considerations: Not available. Created: 10/10/2005 08:22 PM Last Updated: 11/01/2010 12:00 PM The information above 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. In no event shall we be liable for any

claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.

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