Safety Data Sheet (SDS) - L-Theanine

According to Regulation (EC) No 1907/2006 (REACH), as amended by Regulation (EU) 2020/878
Version 1.1, 26-Oct-2026

Section 1. Identification of the substance/mixture and of the company

Product name:	L-Theanine; purity >=98.0%
Recommended uses:	Ingredient for professional formulation, analytical and R&D use
Uses advised against:	Uses not permitted by applicable legislation; household or non-professional use
Catalogue Number:	NST-10-145
Supplier:	NATURE SCIENCE TECHNOLOGIES Ltd Briezu 11, Lapsas, Latvia, LV-2107 Email: inquiries@nstchemicals.com Website: www.nstchemicals.com Emergency: Latvian Poison Information Centre +371 67042473 (24/7)

Section 2. Hazards identification

Classification:



Regulation (EC) No 1272/2008 (CLP): Skin Sens. 1B, H317.
Hazard pictogram: GHS07. Signal word: Warning. Hazard statement: H317 May cause an allergic skin reaction.
Precautionary statements: P261 Avoid breathing dust. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves. P302+P352 IF ON SKIN: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P501 Dispose of contents/container in accordance with applicable regulations.
Other hazards: Fine airborne organic dust may form a combustible dust atmosphere. The substance is not identified as PBT or vPvB. Endocrine-disrupting properties have not been established.

Section 3. Composition/information on ingredients

Chemical name:	L-Theanine (N-gamma-Ethyl-L-glutamine), >=98.0% (assay specification).
Synonyms:	N-gamma-Ethyl-L-glutamine; L-gamma-Glutamylethylamide; Theanine; Suntheanine
Chemical formula:	C7H14N2O3
Molecular weight:	174.20 g/mol
CAS No:	3081-61-6
EC No.	221-379-0

Section 4. First aid measures

Inhalation:	Move to fresh air and keep at rest. Obtain medical advice if coughing, breathing difficulty or other symptoms develop or persist.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation or rash occurs, obtain medical advice. Wash clothing before reuse.
Eyes:	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Obtain medical advice if irritation persists.
Ingestion:	Rinse mouth. Do not induce vomiting. Obtain medical advice if symptoms occur or if a large amount was swallowed. Never give anything by mouth to an unconscious person.

Section 5. Firefighting measures

Extinguishing media suitable:	Water spray, alcohol-resistant foam, dry extinguishing powder or carbon dioxide. Use measures appropriate to the surrounding fire.
Special protection of fire-fighters:	Wear self-contained breathing apparatus and full protective equipment. Combustion may produce carbon monoxide, carbon dioxide, nitrogen oxides and irritating fumes.

Section 6. Accidental release measures

Personal precautions:	Avoid dust formation and inhalation. Avoid skin and eye contact. Ensure adequate ventilation. Wear protective gloves and eye protection. Keep unprotected persons away.
Environmental precautions:	Prevent entry into drains, surface water and soil. Notify authorities if a significant release reaches water or drains.
Methods for cleaning up:	Collect mechanically or with a HEPA-filtered vacuum without generating dust. Place in a closed, labelled container for disposal and clean the area.

Section 7. Handling and storage

Handling:	Handle in a well-ventilated area. Minimise dust. Avoid inhalation, ingestion and contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage:	Store tightly closed in a cool, dry, well-ventilated place. Protect from strong light and heat. Keep away from strong oxidising agents. Supplier specification shelf life: 24 months under recommended conditions.

Section 8. Exposure controls/personal protection

Engineering measures:	No substance-specific occupational exposure limit has been established. Apply applicable nuisance-dust limits. Use local exhaust ventilation and provide eyewash facilities.
Hygiene measures:	Wash hands and exposed skin after handling and before breaks. Do not eat, drink or smoke in work areas. Contaminated work clothing should not leave the workplace.
Personal protective equipment:	Respiratory: suitable particulate-filter respirator where dust forms or ventilation is insufficient. Hands: protective gloves appropriate to the task, e.g. nitrile.
Skin and body:	Protective work clothing appropriate to the scale and duration of exposure. Take off contaminated clothing and wash it before reuse.
Eyes:	Safety glasses with side shields or tightly fitting safety goggles. Add face protection where high dust exposure is possible.

Section 9. Physical and chemical properties

Physical state:	Solid, crystalline powder
Colour:	White
Odour:	No data available
Molecular Weight:	174.20 g/mol
Melting point:	Approximately 206-219 deg C (supplier data)
pH:	5.0-6.0 (quality specification; test solution)
Boiling point:	Not applicable or no data available; decomposition may occur before boiling
Solubility:	Soluble in water; specification requires a clear, colourless solution
Explosive properties:	Not classified as explosive or flammable. Fine airborne organic dust may form a combustible dust atmosphere. Avoid dust accumulation and ignition sources.

Section 10. Stability and reactivity

Stability:	Stable under recommended storage and normal handling conditions. Protect from strong light, heat and moisture.
Materials to avoid:	Strong oxidising agents, excessive heat, ignition sources and strong light. Avoid dust accumulation.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, nitrogen oxides and irritating fumes may form during combustion or thermal decomposition.

Section 11. Toxicological information

Acute toxicity:	Not classified for acute toxicity. Oral LD50, rat: greater than 5000 mg/kg (reference-standard supplier data).
Skin corrosion/irritation:	Available information does not indicate skin corrosion or serious eye damage. Dust may cause mechanical skin or eye irritation.
Respiratory or skin sensitisation:	May cause an allergic skin reaction (Skin Sens. 1B, H317). Respiratory-sensitisation data are not available.
CMR effects:	No adequate product-specific data permit definitive conclusions for germ-cell mutagenicity, carcinogenicity or reproductive toxicity.
Signs and symptoms of exposure:	An allergic skin reaction may include redness, itching, rash or swelling. Dust may mechanically irritate the eyes and respiratory tract.
Potential health effects:	No specific target organs are known from available information.
Inhalation:	Dust may irritate the respiratory tract; no CLP respiratory-irritation classification is assigned.
Skin:	No adequate product-specific repeated-exposure data are available.
Eyes:	Dust may cause mechanical eye irritation; no CLP eye-irritation classification is assigned.
Ingestion:	Health injury is not expected under normal handling; large amounts may cause gastrointestinal discomfort.
Other information:	Avoid skin contact and unnecessary dust exposure; follow the protective measures in Section 8.

Section 12. Ecological information

Ecotoxicity:	Not classified as hazardous to the aquatic environment based on available information. Avoid uncontrolled release.
Persistence and degradability:	Product-specific degradation data are limited. Low bioaccumulation potential is expected (estimated log Pow approximately -3.46); mobility in water and soil may be high because of water solubility.
Other adverse effects:	The substance is not identified as PBT or vPvB on the basis of available information. Endocrine-disrupting properties have not been established.

Section 13. Disposal considerations

Product:	Dispose of contents through a licensed waste contractor in accordance with local, regional and national requirements. Do not discharge to drains.
Contaminated packaging:	Empty completely. Treat contaminated packaging as the product. Recycle only thoroughly cleaned packaging where permitted.

Section 14. Transport information

ADR/RID:	Not regulated as dangerous goods under ADR/RID. No UN number, transport hazard class or packing group assigned.
IMDG:	Not regulated as dangerous goods under IMDG. Not classified as a marine pollutant.
IATA:	Not regulated as dangerous goods under IATA. No UN number, transport hazard class or packing group assigned.

Section 15. Regulatory information

EU regulatory information:	Prepared in accordance with Regulation (EC) No 1907/2006 (REACH), Annex II, as amended by Regulation (EU) 2020/878. Classification and labelling assessed under Regulation (EC) No 1272/2008 (CLP), as amended. A chemical safety assessment has not been carried out by the supplier.

Section 16. Other information

Notice to reader:	Version 1.1; revision date 26-Oct-2026. Approved GHS pictogram artwork was applied with corrected aspect ratio and spacing. Chemical classification and transport wording were not changed. A conservative Skin Sens. 1B, H317 classification was selected because current supplier classifications differ; several current supplier SDSs classify L-Theanine, CAS 3081-61-6, for skin sensitisation, while other supplier documents report no classification. Product identity and quality properties derive from the applicable specification; certificate-specific batch information, lot numbers and dates are excluded. This information is provided in good faith as guidance for safe handling, storage, transport and disposal and is not a warranty of product properties. Users remain responsible for suitability and legal compliance.