



Safety Data Sheet

According to Regulation (EC) no. 1907/2006

Product Name
N-Acetyl-DL-Tryptophan

1.0 Chemical product and company identification

1.1 Product Identifier

MSDS Name: N-Acetyl-DL-Tryptophan
Substance name: TRYPTOPHAN
CAS No: 87-32-1
PRODUCT CODE: TY01

1.2 Details of the supplier of the safety data sheet

SOLUMETRICS LTD

Company Identification:
SOLUMETRICS LTD,
UNIT 1B SILEBY ROAD INDUSTRIAL ESTATE, BARROW ON SOAR, LEIC'S. LE12 8LP.
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2.0 Possible Hazards

2.1 Classification of substance or mixture

This substance is not classified as dangerous according to European Union legislation.

2.2 Label Elements

Labelling (Regulation (EC) No 1272/2008)

Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008.

2.3 Other hazards

None known.

3.0 Composition/ Information on ingredients

3.1 Substances

Formula: $C_{13}H_{14}N_2O_3$ (Hill)
EC-No: 201-739-3
Molar mass: 246.26 g/mol
Remarks: No disclosure requirements according to Regulations (EC) No. 1907/2006

3.2 Mixture

Not applicable

4.0 First Aid measures

4.1 Description of first aid measures

General Advice

If Inhaled: Remove person to fresh air immediately. If breathing is difficult give oxygen. Get medical attention.

In Case of Skin contact: Take off all contaminated clothing immediately. Rinse skin with water / shower.

In case of eye contact: Immediately flush with copious amounts of water for at least 15 minutes occasionally lifting the upper and lower eyelids. Get medical attention as soon as possible. Remove contact lenses.

If Swallowed: If swallowed DO NOT induce vomiting unless directed by to do so by medical personnel. DO NOT give anything by mouth to an unconscious person. Get medical assistance.

4.2 Most important symptoms and effects, both acute and delayed	We have no description of any symptoms of toxicity.
4.3 Indication of any immediate medical attention and special treatment needed	No information available.

5.0 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing Media:	Water, Carbon Dioxide (CO2) Foam, Dry powder
Un-Suitable extinguishing Media:	For this substance/ mixture no limitations of extinguishing agent are given

5.2 Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture	Combustible
Specific hazards during fire fighting:	Combustible. Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: Nitrogen Oxides

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters:	Wear a self-contained breathing apparatus in pressure demand, MSHA/NIOS (approved or equivalent) full protective clothing and equipment.
Further Information:	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6.0 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Advice for non-emergency personnel: Avoid inhalation of dust. Evacuate the danger area, observe emergency procedures, consult an expert.
	Advice for emergency responders: Protective equipment see Section 8

6.2 Environmental precautions:

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases

6.3 Methods and materials for containment and cleaning up:

Sweep or vacuum up material and place in a suitable container for disposal. Clean up spills immediately observing the precautions in the Protective equipment section. Provide adequate ventilation and avoid generating dusty conditions.

Further Information:	Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetaion.
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7.0 Handling and storage

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimise dust generation and accumulation. Avoid contact with eyes, skin and clothing. Keep container(s) tightly closed. Avoid ingestion and inhalation.

7.1 Precautions for safe handling

Advice on safe handling:	Wear personal Protective equipment ensure adequate ventilation do not get in eyes, on skin, or on clothing Avoid ingestion and inhalation avoid dust formation
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Hygiene measures:	Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Use adequate ventilation to keep airborne concentrations low.
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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage area containers:	Store in tightly closed containers in cool dry well ventilated area away from incompatible substances
Advice on Protection Against fire and explosion:	Normal measures for preventive fire protection.
Further information on storage conditions:	Keep tightly closed in a dry and cool place. Keep in well ventilated place.
Advice on common storage:	Keep away from food, drink and animal feeding stuffs.

8.0 Exposure controls/ personal protection

8.1 Control parameters

This product, as supplied does not contain any hazardous material with occupational exposure limits established by the region specific regulatory bodies.

8.2 Exposure controls

Engineering measures

Ensure that eyewash stations and safety showers are close to the workstation location ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

*Respiratory protection***Advice:**

Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standards EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

*Hand Protection***Advice:**

Wear suitable protective clothing, gloves check for compatibility with the manufacturers' guidelines to prevent skin exposure
Wear appropriate protective clothing to prevent skin exposure.

Full Contact

Glove material - Nitrile rubber
Glove thickness - 0.11 mm
Break through time - >480 min

Splash Contact

Glove material - Nitrile rubber
Glove thickness - 0.11 mm
Break through time - >480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril L (full contact) KCL 741 Dermatril L (Splash contact)
The breakthrough times stated above were determined by KCL in laboratory tests acc. To EN374

This recommendation applies only to the product stated in the safety data sheet. When dissolving in or mixing with other substances and under conditions deviating from those stated please contact the supplier of CE-approved gloves

*Eye Protection***Advice:**

Tightly fitting safety goggles
Wear appropriate protective eyeglasses or chemical safety goggles or full face protection. (European standard EN166).

*Skin and Body Protection***Advice:**

The selection of personal protective equipment and procedures for use should be based on the work place risk assessment and local legislation. Respiratory protective equipment and gloves etc should be changed at regular intervals as specified in the work place risk assessment and in accordance with the manufacturer's information.

Environmental exposure controls

General advice

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities for such cases.

9.0 Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Lower explosion limit	No information available
Upper explosion limit	No information available
Vapour pressure	<0,00005 mPa at 20 C Method: OECD Test Guideline 104
Relative vapour density	No information available
Density	1.39 g/cm ³ at 20.5 C Method: OECD Test Guideline 109
Relative density	No information available
Water solubility	0.88 g/l at 20C Method : OECD Test Guideline 105
Partition coefficient: n-octanol/water	log Pow: < 1.7 (23C) OECD Test Guideline 107 Bioaccumulation is not expected.
Auto-ignition temperature	>400C Method: Tested according to Directive 92/69/EEC. not auto-flammable
Decomposition temperature	>215C
Viscosity, dynamic	No information available
Explosive properties	Not classified as explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
9.2 Other data	
Bulk density	370 kg/m ³
Particle size	Mean particle size 94.0

10.0 Stability and reactivity

10.1 Reactivity	The following applies in general to flammable organic substances and mixtures : in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed
10.2 Chemical stability	Sensitivity to light
10.3 Possibility of hazardous reactions	
Hazardous reaction:	Violent reactions possible with: Strong oxidizing agents, acids
10.4 Conditions to avoid	Strong heating (decomposition)
10.5 Incompatible materials	
Materials to avoid:	No information available
10.6 Hazardous decomposition products	In the event of a fire: See section 5

11.0 Toxicological Information**11.1 Information on toxicological effects**

<u>Inhalation</u>	
Remarks	This information is not available
<u>Irritation</u>	
<u>Skin</u>	This information is not available

<u>Eyes</u>	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
<u>Sensitisation</u>	No Information available
<u>Further Information</u>	No Information available
11.2 Further information	Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately Handle in accordance with good industrial hygiene and safety practice.

12.0 Ecological Information**12.1 Toxicity****Toxicity to fish**

Static test LC50 Danio rerio (zebra fish) :> 100mg/l; 96h
OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates
static test EC50 Daphnia magna (Water flea) : > 100 mg/l; 48h
Analytical monitoring: yes
OECD Test Guideline 202

12.2 Persistence and degradability

No information available

Partition coefficient: n-octanol/water log Pow: <-7.7 (23C)
OECD Test Guideline 107

Bioaccumulation is not expected

12.4 Mobility in Soil

No information available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/ not conducted

12.6 Other adverse effects

Surface tension
59,3 mN/m
at 20 C
Method: OECD Test Guideline 115
surface -active substances
Discharge into the environment must be avoided

13.0 Disposal considerations**13.1 Waste treatment methods****Product**

Disposal together with normal waste is not allowed. Special disposal required to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated Packaging

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

European Waste Catalogue Number

No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

14.0 Transport information

Not classified as danerous in the meaning of transport

14.1 UN number

Not Regulated

14.2 UN proper shipping name

ADR
RID
IMDG

Not Regulated
Not Regulated
Not Regulated

14.3 Transport hazard class(es)

ADR-Class
(labels; Classification Code; Hazard Identification No; Tunnel restriction code)

Not Regulated
Not Regulated

RID-Class

Not Regulated

(Labels; Classification Code; Hazard Identification No; Tunnel restriction code)

Not Regulated

IMDG-Class
(Labels; EmS)

Not Regulated

14.4 Packing group

ADR
RID
IMDG

Not Regulated
Not Regulated
Not Regulated

14.5 Environmental Hazards

Labelling according to 5.2.1.8 ADR
Labelling according to 5.2.1.8 RID
Labelling according to 5.2.6.3 IMDG
Classification as environmentally hazardous
According to 2.9.3 IMDG
Classified as 'P' according to 2.10 IMDG

Not Regulated
Not Regulated
Not Regulated
Not Regulated
Not Regulated
Not Regulated

14.6 Special precautions for user

14.7 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG

Not Regulated

15.0 Regulatory Information

EU Regulations
Major Accident Hazard
Legislation
Regulation (EC) No 1005/2009 on substances that
deplete the ozone layer

SEVESO III
Not applicable
Not regulated

Regulation (EC) No850/2004 of the European
Parliament and of the Council of 29 April 2004 on
persistent organic pollutants and amending
Directive 79/117/EEC

Not regulated

Substances of very high concern (SVHC)

This product does not contain substances of very high concern to
regulation (EC) No 1907/2006 (REACH) Article 57 above the respective
regulatory concentration limit of >0.1 % (w/w)

National legislation
Storage Class

Oct-13

16.0 Other information

Training advice

Provide adequate information, instruction and training for operators

Other information

This information is based upon Solumetrics Ltd Knowledge of this product at the time this Safety Data Sheet was prepared. It is given in good faith and no warranty is implied. The information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The user must satisfy him/her self as to the purpose this product is put to and the possible change in classification should this product be mixed or formulated with other compounds