

SAFETY DATA SHEET

Creation Date 10-Dec-2010

Revision Date 14-Feb-2020

Revision Number 2

| 1. Identification | | | |
|---|--|--|--|
| Product Name | L-Tryptophan | | |
| Cat No. : | A10230 | | |
| CAS-No Synonyms | 73-22-3 TRP | | |
| Recommended Use Uses advised against Details of the supplier of the safe | Laboratory chemicals. Food, drug, pesticide or biocidal product use. y data sheet | | |
| Company Alfa Aesar Thermo Fisher Scientific Chemicals 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 | Inc. | | |

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification

Email: tech@alfa.com

www.alfa.com

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Based on available data, the classification criteria are not met

Label Elements None required

Hazards not otherwise classified (HNOC)

None identified

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|-----|--------------|----------------|---|
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| J. | COLIDOSITION | Information on | Indedicina |
| | | | |

| Component | CAS-No | Weight % | |
|--------------|---------|----------|--|
| L-Tryptophan | 73-22-3 | > 99 | |

| | 4. First-aid | measures | | | |
|---|---|---|------------------------------------|--|--|
| Eye Contact | | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur. | | | |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If symptoms physician. | | | | |
| nhalation | Remove to fresh air. If not physician. | breathing, give artificial respire | ation. If symptoms persist, call a | | |
| ngestion | Do NOT induce vomiting. | Clean mouth with water. Get n | nedical attention if symptoms occu | | |
| Nost important symptoms and | None reasonably foreseea | ble. | | | |
| effects Notes to Physician | Treat symptomatically | | | | |
| | 5. Fire-fightin | ng measures | | | |
| | | | | | |
| Suitable Extinguishing Media | Water spray. Carbon dioxi | de (CO 2). Dry chemical. Chen | nical foam. | | |
| Insuitable Extinguishing Media | suitable Extinguishing Media No information available | | | | |
| Flash Point Method - | No information available No information available | | | | |
| Autoignition Temperature Explosion Limits Upper Lower Sensitivity to Mechanical Impa Sensitivity to Static Discharge | | | | | |
| Specific Hazards Arising from the Keep product and empty container a | Chemical way from heat and sources o | f ignition. | | | |
| Hazardous Combustion Products Nitrogen oxides (NOx). Carbon mono Protective Equipment and Precaut As in any fire, wear self-contained br protective gear. | ions for Firefighters | | ved or equivalent) and full | | |
| <u>NFPA</u> Health 1 | Flammability 1 | Instability 0 | Physical hazards N/A | | |
| | 6. Accidental re | lease measures | | | |
| Personal Precautions | Use personal protective ed | uipment as required. Ensure | adequate ventilation. | | |

Methods for Containment and Clean Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. Avoid dust formation.

| | 7. Handling and storage |
|----------|--|
| Handling | Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Minimize dust generation and accumulation. Wash |

| | hands before breaks and immediately after handling the product. | | | |
|-------------------------------|--|--|--|--|
| Storage | Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. | | | |
| 8. E: | xposure controls / personal protection | | | |
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies. | | | |
| | | | | |
| Engineering Measures | None under normal use conditions. | | | |
| Personal Protective Equipment | | | | |
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. | | | |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. | | | |
| Respiratory Protection | No protective equipment is needed under normal use conditions. | | | |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. | | | |

9. Physical and chemical properties

| Physical State | Powder Solid |
|--|-----------------------------|
| Appearance | Off-white |
| Odor | Odorless |
| Odor Threshold | No information available |
| рН | 5.5 - 7.0 |
| Melting Point/Range | 280 - 285 °C / 536 - 545 °F |
| Boiling Point/Range | No information available |
| Flash Point | No information available |
| Evaporation Rate | Not applicable |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available |
| Vapor Density | Not applicable |
| Specific Gravity | No information available |
| Solubility | 11.4 g/L (25°C) |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | |
| Decomposition Temperature | No information available |
| Viscosity | Not applicable |
| Molecular Formula | C11 H12 N2 O2 |
| Molecular Weight | 204.23 |
| | |

10. Stability and reactivity

| Reactive Hazard | None known, based on information available |
|---------------------|--|
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. |

Incompatible MaterialsStrong oxidizing agentsHazardous Decomposition ProductsNitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)Hazardous PolymerizationNo information available.Hazardous ReactionsNone under normal processing.11. Toxicological informationAcute Toxicity

Product Information

| Component Information | | | | | | | | | | |
|--|---|---------------------|--|---------------------|-------------------|------------------|--|--|--|--|
| Component | | LD50 Oral | | LD50 Dermal | | Inhalation | | | | |
| L-Tryptophan | | LD50 > 16 g/kg (Ra | LD50 > 16 g/kg (Rat) Not listed | | No | Not listed | | | | |
| Operation No information available Products No information effects from short and long-term exposure | | | | | | | | | | |
| Irritation | | May cause irritatio | n | | | | | | | |
| Sensitization | | No information ava | ailable | | | | | | | |
| Carcinogenicity | | The table below in | dicates whether e | ach agency has list | ed any ingredient | as a carcinogen. | | | | |
| Component | CAS-No | D IARC | NTP | ACGIH | OSHA | Mexico | | | | |
| L-Tryptophan | 73-22-3 | | Not listed | Not listed | Not listed | Not listed | | | | |
| Mutagenic Effects | | No information ava | ailable | | | | | | | |
| Reproductive Effects | | No information ava | No information available. | | | | | | | |
| Developmental Effe | cts | No information ava | No information available. | | | | | | | |
| Teratogenicity | | No information ava | ailable. | | | | | | | |
| STOT - single exposureNone knownSTOT - repeated exposureNone known | | | | | | | | | | |
| Aspiration hazard No information available | | | | | | | | | | |
| Symptoms / effects delayed | mptoms / effects,both acute and No information available layed | | | | | | | | | |
| Endocrine Disrupto | ndocrine Disruptor Information No information available | | | | | | | | | |
| Other Adverse Effect | cts | The toxicological p | The toxicological properties have not been fully investigated. | | | | | | | |
| | 12. Ecological information | | | | | | | | | |
| Eastaviaity | | | | | | | | | | |

Ecotoxicity Do not empty into drains.

| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
|-------------------------------------|--|
| Bioaccumulation/Accumulation | No information available. |
| Mobility | Will likely be mobile in the environment due to its water solubility. |
| | 13. Disposal considerations |

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| 14. Transport information | | | |
|------------------------------|---------------|--|--|
| DOT | Not regulated | | |
| DOT _ <u>TDG</u> IATA_ | Not regulated | | |
| IATA_ | Not regulated | | |
| IMDG/IMO | Not regulated | | |
| 15. Regulatory information | | | |

United States of America Inventory

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|--------------|---------|------|--|--------------------------------|
| L-Tryptophan | 73-22-3 | Х | ACTIVE | - |

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710) X - Listed '-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|--------------|---------|-----|------|-----------|-------|------|------|-------|----------|
| L-Tryptophan | 73-22-3 | Х | - | 200-795-6 | Х | Х | Х | Х | KE-01428 |

U.S. Federal Regulations

| SARA 313 | Not applicable | | | | |
|---|---|--|--|--|--|
| SARA 311/312 Hazard Categories | See section 2 for more information | | | | |
| CWA (Clean Water Act) | Not applicable | | | | |
| Clean Air Act | Not applicable | | | | |
| OSHA - Occupational Safety and Health Administration | Not applicable | | | | |
| CERCLA | Not applicable | | | | |
| California Proposition 65 | This product does not contain any Proposition 65 chemicals. | | | | |
| | | | | | |
| U.S. State Right-to-Know Regulations | Not applicable | | | | |
| | Not applicable N N N | | | | |

Other International Regulations

Mexico - Grade

No information available

| | 16. Other information | | | | |
|--|--|--|--|--|--|
| Prepared By | Health, Safety and Environmental Department Email: tech@alfa.com www.alfa.com | | | | |
| Creation Date Revision Date Print Date Revision Summary | 10-Dec-2010 14-Feb-2020 14-Feb-2020 SDS authoring systems update, replaces ChemGes SDS No. 73-22-3. | | | | |

Disclaimer

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End of SDS