Safety data sheet according to 1907/2006/EC, Article 31

Printing date 01.07.2013 Revision: 30.01.2007

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name DL-Asparagine monohydrate

Stock number: CAS Number: B20273, L08336 3130-87-8

EC number: 221-521-1
1.2 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG A Johnson Matthey Company Zeppelinstr. 7b Zeppelinst. 7b 76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300 Email: tech@alfa.com

Informing department:

www.alfa.com
www.alfa.com
product safety Tel + +049 (0) 7275 988687-0
Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240 1.4 Emergency telephone number:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC)

No 1272/2008

The substance is not classified as hazardous to health or the environment according to the CLP regulation.

Classification according to Directive 67/548/ EEC or Directive 1999/45/EC

Information concerning particular hazards for human and environment: Other hazards that do not result in

Not applicable

Not applicable

classification No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
Hazard pictograms

Signal word Hazard statements 2.3 Other hazards

Not applicable Not applicable Not applicable Not applicable

Results of PBT and vPvB assessment

PB₁

Not applicable. vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances CAS# Designation: Identification number(s): 3130-87-8 DL-Asparagine monohydrate

EC number: 221-521-1

SECTION 4: First aid measures

4.1 Description of first aid measures After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.

After skin contact Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.
Rinse opened eye for several minutes under running water. Then consult doctor. After eve contact Seek medical treatment.

After swallowing

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available. No further relevant information available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents
5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)

5.3 Advice for mengine Protective equipment: .3 Advice for firefighters

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental precautions:

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

6.3 Methods and material for containment

and cleaning up: Prevention of secondary hazards: 6.4 Reference to other sections

Collect mechanically.

No special measures required.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep containers tightly sealed. Store in cool, dry place in tightly closed containers.

Information about protection against

explosions and fires:

No information known.

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Trade name DL-Asparagine monohydrate

7.2 Conditions for safe storage, including any incompatibilities Storage

Requirements to be met by storerooms and

containers: Information about storage in one common

storage facility:
Further information about storage

7.3 Specific end use(s)

conditions:

No special requirements.

Store away from oxidizing agents.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers. No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of

technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:
Additional information:

Not required. No data

8.2 Exposure controls

Personal protective equipment General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Maintain an ergonomically appropriate working environment. Use breathing protection with high concentrations. Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Impervious gloves

Breathing equipment: Protection of hands:

Not determined

Not applicable.

Product is not explosive.

Material of gloves Penetration time of glove material

Eye protection: Body protection: Safety glasses Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance: Form: Colour: Crystalline powder White Not determined Smell: Odour threshold: Not determined

pH-value:

Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: 219-221 °C (dec) Not determined Not determined

Flash point: Not applicable Inflammability (solid, gaseous) Not determined. Ignition temperature: Decomposition temperature: Not determined Not determined Self-inflammability: Not determined

Danger of explosion: Critical values for explosion:

Lower: Upper: Not determined Not determined Steam pressure: Density Relative density Vapour density Not applicable. Not determined Not determined. Not applicable. Evaporation rate Solubility in / Miscibility with Not applicable.

Water: Partition coefficient (n-octanol/water): Not determined Not determined. Viscosity:

dynamic: kinematic: Not applicable.

Not applicable. No further relevant information available 9.2 Other information

SECTION 10: Stability and reactivity

10.1 Reactivity 10.2 Chemical stability

Thermal decomposition / conditions to be

No information known.

Stable under recommended storage conditions.

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions 10.5 Incompatible materials:

No dangerous reactions known Oxidizing agents Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)

10.6 Hazardous decomposition products:

No effects known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
LD/LC50 values that are relevant for classification:
Skin irritation or corrosion:

No data

May cause irritation Eye irritation or corrosion: Sensitization: May cause irritation No sensitizing effect known.

Germ cell mutagenicity: Carcinogenicity:

No effects known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA

or ACGIH.

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Trade name DL-Asparagine monohydrate

Reproductive toxicity: Specific target organ system toxicity -

repeated exposure:

Specific target organ system toxicity - single

piration hazard:

Additional toxicological information:

No effects known.

No effects known.

No effects known.

No effects known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity

12.1 Toxicity:
12.2 Persistence and degradability
12.3 Bioaccumulative potential
12.4 Mobility in soil

Additional ecological information: General notes:

No further relevant information available No further relevant information available. No further relevant information available. No further relevant information available.

Do not allow material to be released to the environment without proper governmental permits. Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment PBT:

Not applicable.

vPvB: 12.6 Other adverse effects

Not applicable. No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.

Uncleaned packagings: Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport information **UN-Number**

ADR, IMDG, IATA

None

14.2 UN proper shipping name ADR, IMDG, IATA

None

14.3 Transport hazard class(es)

ADR, IMDG, IATA Class

None

Packing group ADR, IMDG, IATA

14.5 Environmental hazards:

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Not applicable.

Transport/Additional information:

Not dangerous according to the above specifications.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Australian Inventory of Chemical

Substances Standard for the Uniform Scheduling of

Substance is listed.

Drugs and Poisons National regulations

Substance is not listed.

Information about limitation of use:

For use only by technically qualified individuals.

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Water hazard class:
Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical

Substance is not listed.

Substances of very high concern (SVHC) according to REACH, Article 57 REACH - Pre-registered substances 15.2 Chemical safety assessment:

Substance is not listed.

Substance is listed.
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet:
Abbreviations and acronyms:

Health, Safety and Environmental Department.

Abbreviations and acronyms:

Health, Safety and Environmental Department.

ADR-Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDE: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LESO: Lethal concentration, 50 percent