Reviewed on 11/11/2008

Product details:

1 Identification of substance:

Product name: D-allo-Threonine Stock number: H27050

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company Johnson Matthey Catalog Company, Inc. 30 Bond Street

Ward Hill, MA 01835-8099 Emergency Phone: (978) 521-6300 CHEMTREC: (800) 424-9300

Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department Emergency information:

After normal hours call Chemtrec at (800) 424-9300. 2 Composition/Data on components:

During normal hours the Health, Safety and Environmental Department.

Chemical characterization: Description: (CAS#)

D-allo-Threonine (CAS# 24830-94-2): 100% Identification number(s):

EINECS Number: 246-488-0

3 Hazards identification

Hazard description: Not applicable Information pertaining to particular dangers for man and environment Not applicable

Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)

Health (acute effects) = 1 Flammability - I FIRE

1 Reactivity - I REACTIVITY 1

Seek immediate medical advice.

4 First aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep

Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact

After skin contact

patient warm.

Rinse opened eye for several minutes under running water. Then consult a After swallowing Seek medical treatment.

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Nitrogen oxides (NOx) Protective equipment:

5 Fire fighting measures

Suitable extinguishing agents

6 Accidental release measures

Ensure adequate ventilation

Keep container tightly sealed.

Store away from oxidizing agents.

Keep container tightly sealed.

Additional information: No data Personal protective equipment

Breathing equipment:

Protection of hands: Impervious gloves

Material of gloves

General Information

Change in condition

Flash point:

Lowers

Upper:

Density:

Vapor pressure:

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Nitrogen oxides

Acute toxicity:

Product name: D-allo-Threonine

11 Toxicological information

on the skin: May cause irritation on the eye: May cause irritation

Additional toxicological information:

water, water course or sewage system.

Subscute to chronic toxicity:

substance is not fully known.

Sensitization: No sensitizing effects known.

available from the EPA, IARC, NTP, OSHA or ACGIH.

Primary irritant effect:

General protective and hygienic measures

9 Physical and chemical properties:

Melting point/Melting range:

Boiling point/Boiling range:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Remove all soiled and contaminated clothing immediately.

Person-related safety precautions:

with water spray or alcohol resistant foam.

acc. to OSHA and ANSI

Material Safety Data Sheet

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Special hazards caused by the material, its products of combustion or resulting gases: In case of fire, the following can be released: Carbon monoxide and carbon dioxide

Do not allow material to be released to the environment without proper

See Section 8 for information on personal protection equipment.

Carbon dioxide, extinguishing powder or water spray. Fight larger fires

Wear self-contained respirator. Wear fully protective impervious suit.

Wear protective equipment. Keep unprotected persons away.

governmental permits. Measures for cleaning/collecting: Pick up mechanically. Additional information: See Section 7 for information on safe handling

See Section 13 for disposal information.

Measures for environmental protection:

7 Handling and storage Handling Information for safe handling:

Store in cool, dry place in tightly closed containers. No special precautions are necessary if used correctly.

Information about protection against explosions and fires: Keep ignition sources away. Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store in cool, dry conditions in well sealed containers.

Additional information about design of technical systems:

Components with limit values that require monitoring at the workplace: Not required.

Further information about storage conditions:

8 Exposure controls and personal protection

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The usual precautionary measures for handling chemicals should be

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

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## The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Eye protection: Safety glasses Body protection: Protective work clothing.

Check protective gloves prior to each use for their proper condition.

pirator when high concentrations are present

Form: Powder Color: White Odori Not determined

Sublimation temperature / start: Not determined

Ignition temperature: Not determined Decomposition temperature: Not determined Danger of explosion: Product does not present an explosion hazard. Explosion limits:

277-279°C (531-534°F)

Not determined

Not applicable

Not determined

Not determined

Not determined

Not determined

Solubility in / Miscibility with Water: Soluble 5 10 Stability and reactivity Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Materials to be avoided: Oxidizing agents (Contd. on page 4) Page 4/5

> Material Safety Data Sheet acc. to OSHA and ANSI

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

12 Ecological information: General notes: Do not allow undiluted product or large quantities of it to reach ground

Do not allow material to be released to the environment without proper

Consult state, local or national regulations to ensure proper disposal.

Other than potential irritation (see above), no information on illness or

lassification data on carcinogenic properties of this material is

injury to humans from acute or chronic exposure to this product is

To the best of our knowledge the acute and chronic toxicity of this

Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information

governmental permits.

Uncleaned packagings:

Product:

Recommendation

DOT regulations: Hazard class:

13 Disposal considerations

Land transport ADR/RID (cross-border) ADR/RID class: None Maritime transport IMDG: IMDG Class: None

Not a hazardous material for transportation.

None

Page 5/5 Material Safety Data Sheet acc. to OSHA and ANSI Printing date II/II/2008 Reviewed on 11/11/2008 Product name: D-allo-Threonine

Observe the general safety regulations when handling chemicals

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic

product is restricted to research and development only.

Information about limitation of use: For use only by technically qualified individuals. 16 Other information:

Air transport ICAO-TI and IATA-DGR:

Product related hazard informations:

ICAO/IATA Class: None

National regulations

Substances List (NDSL).

15 Regulations

Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this

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

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Employers should use this information only as a supplement to other