Printing date II/10/2008 Reviewed on 11/10/2008

1 Identification of substance: Product details:

Product name: N-Acetyl-L-methionine Stock number:

B24312 L14293Manufacturer/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: During normal hours the Health, Safety and Environmental Department.

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

N-Acety1-L-methionine (CAS# 65-82-7): 100% Identification number(s): EINECS Number: 200-617-7

3 Hazards identification

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

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

Classification system

Description: (CAS#)

Health (acute effects) - 1 Flammability - I FIRE 1 Reactivity - I

REACTIVITY 1 4 First aid measures

After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.

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

After eye contact

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

Product name: N-Acetyl-L-methionine

5 Fire fighting measures

resulting gases:

Protective equipment:

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Carbon dioxide, extinguishing powder or water spray. Fight larger fires Special hazards caused by the material, its products of combustion or

In case of fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Sulfur oxides (SOx)

6 Accidental release measures

Ensure adequate ventilation

Person-related safety precautions:

Measures for environmental protection:

See Section 13 for disposal information.

Suitable extinguishing agents

with water spray or alcohol resistant foam.

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

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

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

Keep container tightly sealed.

Store away from oxidizing agents.

Keep container tightly sealed.

No special requirements.

Not required.

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Breathing equipment:

Protection of hands: Impervious gloves

General Information

Ignition temperature:

Danger of explosion:

Explosion limits: Lowers

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Nitrogen oxides Sulfur oxides (SOx)

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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.

12 Ecological information:

governmental permits.

Uncleaned packagings:

14 Transport information

Maritime transport IMDG:

DOT regulations: Hazard class:

ADR/RID class:

IMDG Class:

15 Regulations

National regulations

human consumption.

General notes:

Sensitization: No sensitizing effects known.

Decomposition temperature:

Form:

Odor:

Flash point:

Product name: N-Acetyl-L-methionine

Additional information: No data Personal protective equipment

General protective and hygienic measures

9 Physical and chemical properties:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Remove all soiled and contaminated clothing immediately.

7 Handling and storage Handling Information for safe handling:

and having an average face velocity of at least 100 feet per minute. Components with limit values that require monitoring at the workplace:

See Section 8 for information on personal protection equipment.

Wear protective equipment. Keep unprotected persons away.

Information about protection against explosions and fires: Keep ignition sources away. Storage Requirements to be met by storerooms and receptacles:

Further information about storage conditions:

8 Exposure controls and personal protection

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

Information about storage in one common storage facility:

Store in cool, dry conditions in well sealed containers.

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals

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The usual precautionary measures for handling chemicals should be

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Material of gloves 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

Powder

Not determined

Not applicable

Not determined Not determined

explosion hazard.

Not determined

Not determined

Product does not present an

Change in condition Melting point/Melting range: 104-107°C (219-225°F) Boiling point/Boiling range: Not determined Sublimation temperature / start: Not determined

Upper: Vapor pressure: Not determined Not determined Density: 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 Dangerous reactions No dangerous reactions known Dangerous products of decomposition: Carbon monoxide and carbon dioxide (Contd. on page 4)

acc. to OSHA and ANSI

Material Safety Data Sheet

11 Toxicological information Acute toxicity: Primary irritant effect:

13 Disposal considerations Product: Recommendation

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

Recommendation: Disposal must be made according to official regulations.

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

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

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

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

ICAO/IATA Class: None

Not a hazardous material for transportation.

None Land transport ADR/RID (cross-border)

None

None Air transport ICAO-TI and IATA-DGR:

Material Safety Data Sheet acc. to OSHA and ANSI Reviewed on II/I0/2008 Printing date II/I0/2008 Product name: N-Acetyl-L-methionine

Observe the general safety regulations when handling chemicals

cosmetic, our products are not approved or suitable for such use or for

Transport/Additional information:

Product related hazard informations:

16 Other information: Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of

Department issuing MSDS: Health, Safety and Environmental Department. Contact: Paul V. Connolly

process, is the responsibility of the user.

Protection Agency Toxic Substances Control Act Chemical substance All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL). Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Although this chemical may sometimes be used as a food or drug or

Not dangerous according to the above specifications.

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

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All components of this product are listed in the U.S. Environmental