1 Identification of substance:

Product details: Product name: Acetaldoxime

Stock number: A10640

Emergency information:

L03931

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

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

Information Department: Health, Safety and Environmental Department

During normal hours the Health, Safety and Environmental Department.

Chemical characterization:

EINECS Number: 203-479-6 3 Hazards identification

Acetaldoxime (CAS# 107-29-9): 100%

Identification number(s):

Description: (CAS#)

Hazard description:

Xi Irritant

Information pertaining to particular dangers for man and environment

HMIS ratings (scale 0-4)

Flammable.R 36/37/38 Irritating to eyes, respiratory system and skin. Classification system

REACTIVITY 1

(Hazardous Materials Identification System) Health (acute effects) - 1 Flammability - 2 2 FIRE

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.

Reactivity - I

Printing date II/10/2008

Product name: Acetaldoxime

After eye contact

Seek immediate medical advice.

Material Safety Data Sheet acc. to OSHA and ANSI Reviewed on II/I0/2008

After swallowing Seek immediate medical advice.

In case of fire, the following can be released:

(Contd. of page 1)

(Contd. on page 2)

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In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water. For safety reasons unsuitable extinguishing agents Water

Special hazards caused by the material, its products of combustion or

Rinse opened eye for several minutes under running water. Then consult a

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6 Accidental release measures

Measures for environmental protection:

Measures for cleaning/collecting:

Nitrogen oxides (NOx)

governmental permits.

5 Fire fighting measures

Suitable extinguishing agents

Carbon monoxide and carbon dioxide

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Keep away from ignition sources

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

Absorb with liquid-binding material (sand, diatomite, acid binders,

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.

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Reviewed on 11/10/2008

Form: Liquid Not determined Odor: Melting point/Melting range: Not determined Boiling point/Boiling range: Not determined Sublimation temperature / start: Not determined 40°C (104°F) Not determined Decomposition temperature: Not determined Explosion limits: Upper: Not determined Not determined Vapor pressure: Density at 20°C (68°F): 0.969 g/cm³ (Contd. on page 4)

Product name: Acetaldoxime (Contd. of page 3) Solubility in / Miscibility with Fully miscible 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 Nitrogen oxides 11 Toxicological information Acute toxicity: Primary irritant effect: on the skin: Irritant to skin and mucous membranes. on the eye: Irritating effect. Sensitization: No sensitizing effects known. Other information (about experimental toxicology): Mutagenic effects have been observed on tests with laboratory animals.

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

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

Material Safety Data Sheet acc. to OSHA and ANSI

Printing date II/I0/2008

Subscute to chronic toxicity:

substance is not fully known.

12 Ecological information:

governmental permits.

General notes:

Additional toxicological information:

water, water course or sewage system.

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

13 Disposal considerations Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. (Contd. on page 5)

> Material Safety Data Sheet acc. to OSHA and ANSI

> > III

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ACETALDEHYDE OXIME

3 (F1) Flammable liquids

2332 ACETALDEHYDE OXIME

ACETALDEHYDE OXIME

ACETALDEHYDE OXIME

Land transport ADR/RID (cross-border)

Danger code (Kemler):

Description of goods: Maritime transport IMDG:

Printing date II/I0/2008

Product name: Acetaldoxime

DOT regulations:

Hazard class:

Packing group:

ADR/RID class:

Packaging group:

UN-Number:

IMDG Class: UN Number:

Packaging group:

ICAO/IATA Class: UN/ID Number:

Packaging group:

Hazard symbols: Xi Irritant

Proper shipping name:

Label

15 Regulations

Proper shipping name:

Air transport ICAO-TI and IATA-DGR:

Product related hazard informations:

Label

14 Transport information

Identification number:

Proper shipping name (technical

(Contd. on page 6)

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(Contd. of page 4)

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

Material Safety Data Sheet acc. to OSHA and ANSI Reviewed on 11/10/2008 Printing date II/10/2008 Product name: Acetaldoxime (Contd. of page 5) Risk phrases: Flammable. 36/37/38 Irritating to eyes, respiratory system and skin. 7 Keep container tightly closed. 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 33 Take precautionary measures against static discharges. 37 Wear suitable gloves. 43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water. 60 This material and its container must be disposed of as hazardous waste. National regulations All components of this product are listed in the U.S. Environmental 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.

universal binders, sawdust). Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents Keep away from ignition sources. Additional information: See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage Handling Information for safe handling: Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: Keep ignition sources away. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture. Storage Requirements to be met by storerooms and receptacles: No special requirements. (Contd. on page 3) Page 3/6 Material Safety Data Sheet acc. to OSHA and ANSI Printing date II/I0/2008 Reviewed on 11/10/2008 Product name: Acetaldoxime (Contd. of page 2) Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. 8 Exposure controls and personal protection Components with limit values that require monitoring at the workplace: Not required. Additional information: No data Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Eye protection: Safety glasses Body protection: Protective work clothing. 9 Physical and chemical properties: General Information Change in condition Flash point: Ignition temperature: