Printing date II/II/2008

Product details: Product name: Indole-3-acetonitrile

Stock number: L05455 Manufacturer/Supplier:

1 Identification of substance:

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: Description: (CAS#) Indole-3-acetonitrile (CAS# 771-51-7): 100% Identification number(s):

EINECS Number: 212-232-1

3 Hazards identification Hazard description:

Xn Harmful

Information pertaining to particular dangers for man and environment R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. Classification system

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

doctor.

Health (acute effects) - 2 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

Material Safety Data Sheet

5 Fire fighting measures

Suitable extinguishing agents

Wear self-contained respirator.

6 Accidental release measures

Ensure adequate ventilation

governmental permits.

7 Handling and storage

Keep ignition sources away.

No special requirements.

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Not required.

Breathing equipment:

Protection of hands: Impervious gloves

Material of gloves

General Information

Forms

Color:

Odor:

Nitrogen oxides

Acute toxicity:

Product name: Indole-3-acetonitrile

Additional information: No data Personal protective equipment

General protective and hygienic measures

Avoid contact with the eyes and skin.

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.

Use suitable respirator when high concentrations are present.

Handling

Person-related safety precautions:

Measures for cleaning/collecting:

Wear fully protective impervious suit.

Measures for environmental protection:

See Section 13 for disposal information.

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resulting gases:

Product name: Indole-3-acetonitrile (Contd. of page 1)

After swallowing Seek immediate medical advice.

with water spray or alcohol resistant foam.

acc. to OSHA and ANSI

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

(Contd. on page 2)

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In case of fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Hydrogen cyanide (HCN) Protective equipment:

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

Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Additional information: See Section 7 for information on safe 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:

Information about storage in one common storage facility:

Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Refrigerate

Requirements to be met by storerooms and receptacles:

8 Exposure controls and 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. Components with limit values that require monitoring at the workplace:

The usual precautionary measures for handling chemicals should be

Material Safety Data Sheet acc. to OSHA and ANSI

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.

Solid

Yellow Brown

Not determined

Ignition temperature: Not determined Decomposition temperature: Not determined Danger of explosion: Product does not present an explosion hazard. Explosion limits: Lowers Not determined Upper: Not determined Vapor pressure: Not determined Density: Not determined (Contd. on page 4) Page 4/6 Material Safety Data Sheet acc. to OSHA and ANSI Reviewed on 09/24/2008 Printing date II/II/2008

Many nitriles resemble cyanides in toxicity. Exposure to nitriles may cause increased salivation, flushing of the face, eye and respiratory tract irritation, shallow respiration, nausea, vomiting, weakness, headache and diarrhea. Jaundice, anemia, and leucocytosis has been reported in some cases. Some are suspected carcinogens, teratogens or

14 Transport information DOT regulations:

name):

IMDG Class: 6.1 UN Number: 3439 Label

(Contd. on page 5)

ICAO/IATA Class: 6.1 UN/ID Number: 3439 Label 6.1 Packaging group: III

Page 6/6 Material Safety Data Sheet acc. to OSHA and ANSI Printing date 11/11/2008 Reviewed on 09/24/2008 Product name: Indole-3-acetonitrile (Contd. of page 5) NITRILES, TOXIC, SOLID, N.O.S. (Indole-Proper shipping name: 3-acetonitrile) 15 Regulations Product related hazard informations: Hazard symbols: Xn Harmful Risk phrases: 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. Safety phrases: 36/37 Wear suitable protective clothing and gloves. National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Danger through skin absorption. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. 12 Ecological information: General notes: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Do not allow material to be released to the environment without proper governmental permits. 13 Disposal considerations Product: Recommendation Consult state, local or national regulations to ensure proper disposal. Material Safety Data Sheet acc. to OSHA and ANSI Printing date 11/11/2008 Product name: Indole-3-acetonitrile Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

Materials to be avoided: Oxidizing agents Dangerous reactions No dangerous reactions known Dangerous products of decomposition: Carbon monoxide and carbon dioxide Hydrogen cyanide (prussic acid) 11 Toxicological information Primary irritant effect: on the skin: Irritant to skin and mucous membranes. on the eye: Irritating effect. Sensitization: No sensitizing effects known. Subacute to chronic toxicity:

Change in condition Melting point/Melting range: 35-37°C (95-99°F) Boiling point/Boiling range: 158-160°C (316-320°F) (0.1 mmHg) Sublimation temperature / start: Not determined 206°C (403°F) Flash point: Product name: Indole-3-acetonitrile (Contd. of page 3) Solubility in / Miscibility with Insoluble 10 Stability and reactivity Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Wear protective equipment. Keep unprotected persons away. Do not allow material to be released to the environment without proper

See Section 8 for information on personal protection equipment.

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(Contd. of page 2)

(Contd. on page 3)

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

Department issuing MSDS: Health, Safety and Environmental Department.

process, is the responsibility of the user. Contact: Paul V. Connolly

Inventory. 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. 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

Page 5/6 Reviewed on 09/24/2008 Hazard class: 6.1 Identification number: UN3439 Packing group: IIIProper shipping name (technical NITRILES, TOXIC, SOLID, N.O.S. (Indole-3-acetonitrile) 6.1 Land transport ADR/RID (cross-border) ADR/RID class: 6.1 (T2) Toxic substances Danger code (Kemler): UN-Number: 3439 Packaging group: 3439 NITRILES, TOXIC, SOLID, N.O.S. Description of goods: (Indole-3-acetonitrile) Maritime transport IMDG: 6.1 Packaging group: IIIProper shipping name: NITRILES, TOXIC, SOLID, N.O.S. (Indole-3-acetonitrile) Air transport ICAO-TI and IATA-DGR: (Contd. on page 6)