Reviewed on 11/10/2008

Product details:

1 Identification of substance:

Product name: Hesperetin

Stock number:

B20528 L14203

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: 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:

(CAS# 520-33-2): 100% Identification number(s):

4'-Methoxy-3',5,7-trihydroxyflavanone

EINECS Number: 208-290-2

3 Hazards identification

Description: (CAS#)

Hazard description: Xi Irritant

Information pertaining to particular dangers for man and environment R 36/37/38 Irritating to eyes, respiratory system and skin. Classification system

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

Flammability - I 1 FIRE Reactivity - I REACTIVITY 1

Health (acute effects) - 1

Immediately wash with water and soap and rinse thoroughly.

4 First aid measures After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact

Seek immediate medical advice.

After eye contact

resulting gases:

doctor.

Material Safety Data Sheet acc. to OSHA and ANSI

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After swallowing Seek immediate medical advice.

In case of fire, the following can be released:

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

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5 Fire fighting measures Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

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

Ensure adequate ventilation

Information for safe handling: Keep container tightly sealed.

Store away from oxidizing agents.

Keep container tightly sealed.

governmental permits.

Handling

Additional information:

Carbon monoxide and carbon dioxide

Measures for environmental protection:

See Section 7 for information on safe handling

Ensure good ventilation at the workplace.

Further information about storage conditions:

6 Accidental release measures Person-related safety precautions: 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. See Section 13 for disposal information. 7 Handling and storage

Store in cool, dry place in tightly closed containers.

Measures for cleaning/collecting: Ensure adequate ventilation.

Keep ignition sources away. Storage 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.

Information about protection against explosions and fires:

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Not required.

Breathing equipment:

Protection of hands: Impervious gloves

Material of gloves

General Information

Ignition temperature:

Danger of explosion:

Explosion limits: Lowers

Upper:

specifications.

Acute toxicity:

11 Toxicological information

on the eye: Irritating effect.

Subscute to chronic toxicity:

substance is not fully known.

12 Ecological information:

13 Disposal considerations

governmental permits.

Uncleaned packagings:

General notes:

Recommendation

Product name: Hesperetin

ADR/RID class:

IMDG Class:

Hazard symbols: Xi Irritant

Maritime transport IMDG:

ICAO/IATA Class: None

Product:

Primary irritant effect:

Decomposition temperature:

Porm:

Flash point:

Additional information: No data Personal protective equipment

General protective and hygienic measures

9 Physical and chemical properties:

8 Exposure controls and personal protection

Additional information about design of technical systems:

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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.

The usual precautionary measures for handling chemicals should be

Use suitable respirator when high concentrations are present.

Material Safety Data Sheet acc. to OSHA and ANSI

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 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.

Odor: Not determined Change in condition 230-232°C (446-450°F) Melting point/Melting range: Boiling point/Boiling range: Not determined Sublimation temperature / start: Not determined

Powder

Not applicable

Not determined

Not determined

Not determined Not determined

explosion hazard.

Product does not present an

Vapor pressure: Not determined Not determined Density: (Contd. on page 4)

> Material Safety Data Sheet acc. to OSHA and ANSI

Reviewed on 11/10/2008 Printing date II/I0/2008 Product name: Hesperetin Solubility in / Miscibility with Insoluble 10 Stability and reactivity Thermal decomposition / conditions to be avoided:

Materials to be avoided: Oxidizing agents

Dangerous reactions No dangerous reactions known

on the skin: Irritant to skin and mucous membranes.

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

Sensitization: No sensitizing effects known.

Additional toxicological information:

Decomposition will not occur if used and stored according to

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

14 Transport information Not a hazardous material for transportation. DOT regulations: Hazard class: None

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Land transport ADR/RID (cross-border)

None Air transport ICAO-TI and IATA-DGR:

Transport/Additional information:

Product related hazard informations:

Information about limitation of use:

Not dangerous according to the above specifications. 15 Regulations

Risk phrases: 36/37/38 Irritating to eyes, respiratory system and skin. 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

Substances List (NDSL).

National regulations

Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic

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

warranty, and any use of the product not in conformance with this process, is the responsibility of the user. Department issuing MSDS: Health, Safety and Environmental Department. Contact: Paul V. Connolly

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This product is not listed in the U.S. Environmental Protection Agency

Material Safety Data Sheet, or in combination with any other product or

health and safety of employees. This information is furnished without

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 material to be released to the environment without proper Consult state, local or national regulations to ensure proper disposal. Recommendation: Disposal must be made according to official regulations. (Contd. on page 5)

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