Product Name:

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Manufacturer/Supplier Name: Alfa Aesar - A Johnson Matthey Company 30 Bond St.

DL-4-Hydroxymandelic acid monohydrate, 97%

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L05916

Address: Ward Hill, MA 01835 Business Phone: 978-521-6300

Business Fax: 978-521-6350 For information in North America, call: 978-521-6300 CHEMTREC Numbers: For emergencies in the US, call CHEMTREC: 800-424-9300

For emergencies outside US, call INTERNATIONAL: (703)527-3887 For Nonemergency, call: (800)262-8200

SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

**Chemical Name** DL□ 4□ Hydroxymandelic acid monohydrate 184901-84-6

Can cause severe eye irritation.

May cause respiratory system irritation.

May cause skin irritation.

% Weight (Typical)

Eye Contact:

Skin Contact:

Inhalation:

Ingestion:

Target Organs:

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: Irritant.

DL 4 Hydroxymandelic acid monohydrate Route of Exposure: Eyes. Potential Health Effects:

No data

Eyes.

SECTION 4 : FIRST AID MEASURES Eye Contact: Immediately flush eyes with plenty of water for at least 20 minutes.

Assure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention if irritation persists, or symptoms

of overexposure become apparent. Skin Contact: Immediately wash skin with plenty of water for at least 20 minutes, while removing contaminated clothing and shoes. Get medical attention especially, if irritation develops, persists, or symptoms of overexposure

SECTION 5 : FIRE FIGHTING MEASURES

SECTION 6: ACCIDENTAL RELEASE MEASURES

SECTION 7: HANDLING and STORAGE

No data

Flash Point:

Extinguishing Media:

Protective Equipment:

Personal Precautions:

Handling:

Hygiene Practices:

Engineering Controls:

Skin Protection Description:

Hand Protection Description:

Eye/Face Protection:

Respiratory Protection:

Other Protective:

Color:

Flash Point:

Boiling Point:

Melting Point:

Conditions to Avoid:

Possible Decomposition

Materials:

Product:

Eye Effect:

Skin Effects:

Ecotoxicity:

Bioaccumulation:

Environmental Stability:

Biodegredation:

Waste Disposal:

Risk Phrases:

Safety Phrase:

MSDS Preparation Date:

obtained by personal experience.

Industrial Hygiene and Toxicology, by F.A. Patty.

Biological Exposure Indices, TLV Booklet, 2001.

 OSHA Hazard Communication Standard, 1910.1200 and Z Tables. 11. Sax Dangerous Properties of Industrial Materials. Tenth Edition.

Research on Cancer.

Bank (HSDB).

Hazards.

MSDS Revision Date:

MSDS Author:

Disclaimer:

Incompatibilities with Other

Physical State/Appearance:

Spill Cleanup Measures:

Unsuitable Media:

become apparent. Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Keep warm. Get immediate medical attention.

Ingestion: If swallowed, call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed by medical personnel. Get medical attention.

Water extinguishers are not recommended.

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disposal. Refer to section 13 for disposal requirements. Environmental Precautions: Do not allow material to enter drains or streams. To Top of page

Use proper personal protective equipment as listed in section 8. Clean up spills immediately, observing precautions in the Protective

Equipment section. Sweep up, then place into a suitable container for

This product should be handled only by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous

incompatible substances. Keep container tightly closed when not in use.

Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid

Use dry powder or carbon dioxide when fighting a fire involving this

NIOSH (approved or equivalent) and full protective gear.

As in any fire, wear self-contained breathing apparatus pressure-demand,

chemicals, who should take into account the fire, health and chemical hazard data. It should always be handled in an efficient fume hood or equivalent system. The user should consider that the toxicological and physiological properties of many compounds are not yet well determined and that new hazardous products may arise from reactions between chemicals. Care should be taken to prevent any chemical from coming into contact with the skin or eyes and from contaminating personal clothing. Store in a cool, dry, well ventilated area away from sources of heat and Storage:

inhaling dust.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

personal protective equipment.

conditions warrant a respirators use.

eyewash facility and a safety shower.

permeability data.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

Solid

White

No data

No data

88-90°C (190.4-194°F)

Heat, flames and sparks.

Oxidizing agents.

Carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION

DL 4 Hydroxymandelic acid monohydrate

SECTION 12 : ECOLOGICAL INFORMATION

SECTION 13: DISPOSAL CONSIDERATIONS

SECTION 15: REGULATORY INFORMATION

DL 4 Hydroxymandelic acid monohydrate

SECTION 16: ADDITIONAL INFORMATION

TSCA 8(b): Inventory Status: No data

Use appropriate engineering control such as process enclosures, local

exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the

Wear appropriate protective gloves. Consult glove manufacturers for glove

Wear appropriate protective glasses or splash goggles as described by 29

CFR 1910.133, OSHA eye and face protection regulation, or the European

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited to airborne concentrations that are typically within 10 times the exposure limit. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where

Wear suitable protective clothing to prevent contact with skin.

air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHAs 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace

Facilities storing or utilizing this material should be equipped with an

Solubility in Water: Soluble @ 20°C (68°F) Density: No data Molecular Formula: C<sub>8</sub>H<sub>8</sub>O<sub>4</sub>-H<sub>2</sub>O Molecular Weight: 186.17 To Top of page SECTION 10: STABILITY and REACTIVITY Catalog No. L05916

No data reported in the cited references as of the revision date.

No data reported in the cited references as of the revision date.

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or

S26 In case of contact with eyes, rinse immediately with plenty of water

state and local guidelines, by a licensed disposal company.

No data reported in the cited references as of the revision date. Ingestion Effects: No data reported in the cited references as of the revision date. Inhalation Effects: To Top of page

No information provided.

No information provided. No information provided.

No information provided.

SECTION 14: TRANSPORT INFORMATION Catalog No. L05916 DOT Hazard Class: No data. DOT Identification Number: No data. To Top of page

R41 Risk of serious damage to eyes.

and seek medical advice. S39 Wear eye/face protection.

References: American Chemical Society, STN Easy Online Database 2. Brethericks Reactive Chemical Hazards Database. Version 2. Gassarett and Doulls Toxicology, The Basic Science of Poisons. Hawleys Condensed Chemical Dictionary, Thirteenth Edition

5. IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, WHO International

7. National Library of Medicine, Department of Health and Human Services, Hazardous Substances Data

12. The Merck Index: An Encyclopedia of Chemicals and Drugs. Merck and Company. Twelfth Edition 1998. 13. Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environmental and

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National Toxicology Program (NTP) Eighth Report on Carcinogens, 1997.
NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) and Pocket Guide to Chemical

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customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals

Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet. We welcome any additional information about our products that customers ha

shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all

January 1, 2002, Version 1

April 14, 2003.

Actio Corporation.

should be handled only by competent personnel, within a controlled environment.