Reviewed on 03/05/2007

Safety Data Sheet acc. to OSHA HCS

Printing date 01/22/2014

1 Identification

CAS Number:

Product identifier Product name: <u>D-Erythrose</u> Stock number: B21093, L08920

583-50-6
EC number:
209-505-2
Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company Johnson Matthey Catalog Company, Inc. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech@alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 The substance is not classified as hazardous to health or the environment according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable Information concerning particular hazards for human and environment: Not applicable No information known.

Hazards not otherwise classified No information known. Label elements Labelling according to Regulation (EC) No 1272/2008 Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable WHMIS classification Not controlled Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 0 FIRE 1 REACTIVITY 1

Health (acute effects) = 0 Flammability = 1 Physical Hazard = 1

Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances CAS# Description: 583-50-6 D-Erythrose Identification number(s): EC number: 209-505-2

4 First-aid measures

Description of 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.

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After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Advice for firefighters Protective equipment:

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Prevention of secondary hazards: No special measures required.
Reference to other sections
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

Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. **Information about protection against explosions and fires:** No information known.

Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Store away from water/moisture. Further information about storage conditions: This product is hygroscopic. Store under dry inert gas. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from humidity and water. Specific end use(s) No further relevant information available.

8 Exposure controls/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.

Control parameters

Components with limit values that require monitoring at the workplace: Not required.

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Additional information: No data

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Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. 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.

9 Physical and chemical properties

Information on basic physical and chemical properties General Information Appearance: Form: Viscous liquid Color: Colorless Odor: Not determined Odor threshold: Not determined. pH-value: Not determined. Change in condition Melting point/Melting range: Not determined Boiling point/Boiling range: Not determined Sublimation temperature / start: Not determined Sublimation temperature / start: Not determined Flash point: Not determined Primability (solid, gaseous) Not determined Decomposition temperature: Not determined Auto igniting: Not determined Explosion limits: Lower: Not determined Upper: Not determined Despressure: Not determined Vapor pressure: Not determined Density: Not determined Relative density Not determined. Solubility in / Miscibility with Mater: Fully miscible Partition coefficient (n-octanol/water): Not determined. Viscosity: Not determined. Not determined. Viscosity: Not determined. Not determined. No		
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Other information No further relevant information available.		
	Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions No dangerous reactions known Incompatible materials: Oxidizing agents Water/moisture Hazardous decomposition products: Carbon monoxide and carbon dioxide

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USA

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11 Toxicological information

Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Behavior in environmental systems: Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable. Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
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.

14 Transport information

Not a hazardous material for transportation.

UN-Number DOT, ADR, IMDG, IATA	None	
UN proper shipping name DOT, ADR, IMDG, IATA	None	
Transport hazard class(es)		
DOT, ADR, IMDG, IATA Class	None	
Packing group DOT, ADR, IMDG, IATA	None	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
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USA

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Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code Not applicable.
Transport/Additional information: Not dangerous according to the above
specifications.
DOT
Marine Pollutant (DOT): No

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substances of very high concern (SVHC) according to REACH, Article 57 Substance is not listed. REACH - Pre-registered substances Substance is listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS: Health, Safety and Environmental Department. Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent