



SIGMA-ALDRICH

Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name Dextran sulfate sodium salt from *Leuconostoc* spp.
Product Number D8001
Brand Sigma-Aldrich
Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
DEXTRAN SULFATE SODIUM SALT	9011-18-1	No		

Formula
Synonyms Asuro, Dexnon, Dextran, hydrogen sulfate, sodium salt (9CI), Dextran sodium sulfate, Dextran sulfate sodium salt, Dextrarine, Dexulate, DS-M-1, MDS, MDS (polysaccharide), Sodium dextran sulfate

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation. Endocrine system, G.I. System.

HMIS Rating
Health: 1* Flammability: 0 Reactivity: 0

NFPA Rating
Health: 1 Flammability: 0 Reactivity: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media

Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed. Store at 2-8°C

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand

Protective gloves.

Eye

Chemical safety goggles.

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General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State Solid	Slightly beige	Powder

Molecular Weight: N/A

pH 6.0 - 8.0

Concentration: 10 g/l

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density N/A

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point °F N/A

Flash Point °C N/A

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A

Solubility

Solubility in Water: 10% in H₂O, 25°C, clear, colorless

N/A = not available

Section 10 - Stability and Reactivity

Stability

Stable

Stable

Materials to Avoid

Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Sulfur oxides.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

May cause skin irritation.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

May cause eye irritation.

Inhalation

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed.

Target Organ(s) or System(s)

G.I. System. Endocrine system.

Signs and Symptoms of Exposure

Dextran is a potent antigen. Overexposure can cause a temporary increase in cardiac output.

RTECS Number: HH9290000

Toxicity Data

Oral - Rat: 20600 mg/kg (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Ataxia.

Gastrointestinal:Hypermotility, diarrhea.

Intravenous - Rat: 473 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Ataxia.

Lungs, Thorax, or Respiration:Respiratory depression.

Oral - Mouse: 25200 mg/kg (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Ataxia.

Gastrointestinal:Hypermotility, diarrhea.

Intravenous - Mouse: 2350 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Ataxia.

Lungs, Thorax, or Respiration:Respiratory depression.

Intravenous - Rabbit: 19 GM/KG (LD50)

Chronic Exposure - Carcinogen

Rat - Oral: 330 GM/KG 94W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors. Gastrointestinal:Colon tumors.

Hamster - Oral: 144 ML/KG 26W C

Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Gastrointestinal:Tumors.

Rat - Oral: 335 GM/KG 19W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors. Gastrointestinal:Colon tumors.

Rat - Oral: 600 GM/KG 69W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Colon tumors. Endocrine:Tumors.

Rat - Oral: 645 GM/KG 31W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Colon tumors.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US Classification and Label Text

US Statements

Caution: Avoid contact and inhalation. Endocrine system. G.I. System.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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