

Revision Date: 02-03-2021

SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

1. Identification

Product identifier: D-(+)-Galactose

Other means of identification

Product No.: 2102, 2103, 5094, 6322, BS27, M672, 33441, 37850, 37854

Recommended restrictions

Recommended use: For Laboratory, Research or Manufacturing Use.

Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Company Name: Avantor Performance Materials, LLC

Address: 100 Matsonford Rd, Suite 200

Radnor, PA 19087

Telephone: Customer Service: 855-282-6867

Contact Person: Product Information Compliance E-mail: info@avantormaterials.com

Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary

Statements

Not applicable

Hazard(s) not otherwise

classified (HNOC):

None.

3. Composition/information on ingredients

Substances



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Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet

to the doctor in attendance.

Ingestion: Rinse mouth thoroughly. Large quantities: Call a physician or poison control

center immediately.

Inhalation: Move to fresh air. Get medical attention if symptoms persist.

Skin Contact: Rinse with water. Wash skin thoroughly with soap and water. Get medical

attention if irritation persists after washing.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Most important symptoms/effects, acute and delayed

Symptoms: May cause irritation to skin, eyes and respiratory tract.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: Move containers from fire area if you can do so without risk. Use water

spray to keep fire-exposed containers cool. Cool containers exposed to

flames with water until well after the fire is out.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing

media:

Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing

media:

None known.

Specific hazards arising from

the chemical:

Dust may form explosive mixture with air.

Special protective equipment and precautions for firefighters

Special fire fighting

procedures:

No data available.

Special protective equipment

for fire-fighters:

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in

enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. Keep unauthorized personnel away. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate

protective clothing. Avoid inhalation of dust.



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Methods and material for containment and cleaning

up:

Sweep up and place in a clearly labeled container for chemical waste.

Clean surface thoroughly to remove residual contamination.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Inform

authorities if large amounts are involved.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid generation and spreading of dust. Use only with adequate ventilation.

Avoid inhalation of dust. Use personal protective equipment as required.

See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage,

including any incompatibilities:

Keep container tightly closed. Store in cool, dry place. Store in a well-

ventilated place. Avoid conditions which create dust.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering

Controls

No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions. If applicable, use

process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the

immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles). Use tight fitting goggles

if dust is generated.

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Air-purifying

respirator with a high efficiency particulate filter.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal

hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Avoid contact with eyes, skin, and clothing.

9. Physical and chemical properties

Appearance

Physical state:SolidForm:Solid



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Color: White Odor: Odorless

Odor threshold:

PH:

No data available.

No data available.

Melting point/freezing point: 167.2 °C

Initial boiling point and boiling range:

Flash Point:

Evaporation rate:

No data available.

No data available.

No data available.

No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available. Flammability limit - lower (%): No data available. **Explosive limit - upper (%):** No data available. Explosive limit - lower (%): No data available. Vapor pressure: No data available. Vapor density: No data available. 1.72 g/ml (20 °C) Density: 1.72 (20 °C) Relative density:

Solubility(ies)

Solubility in water: Soluble

Solubility (other):

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

No data available.

Other information

Molecular weight: $180.16 \text{ g/mol } (C_6H_{12}O_6)$

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous

reactions:

Hazardous polymerization does not occur.

Conditions to avoid: Heat, sparks, flames. Contact with incompatible materials.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition

Products:

Thermal decomposition may release oxides of carbon.

11. Toxicological information

Information on likely routes of exposure

Inhalation: Dust may irritate respiratory system.

Skin Contact: Prolonged skin contact may cause temporary irritation.

Eye contact: May cause temporary eye irritation.



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Ingestion: Large amount may cause gastrointestinal upset.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: No data available.

Dermal

Product: No data available.

Inhalation

Product: No data available.

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Eye Irritation

Product: May cause temporary eye irritation.

Respiratory or Skin Sensitization

Product: Not a skin nor a respiratory sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Product: None known.

Specific Target Organ Toxicity - Repeated Exposure

Product: None known.



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Aspiration Hazard

Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: The product components are not classified as environmentally hazardous.

However, this does not exclude the possibility that large or frequent spills

can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local

laws.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even

after container is emptied.



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14. Transport information

DOT

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Not classified

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.



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US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

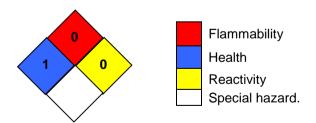
Not applicable

Inventory Status:

Australia AICS: On or in compliance with the inventory Canada DSL Inventory List: On or in compliance with the inventory China Inv. Existing Chemical Substances: On or in compliance with the inventory Japan (ENCS) List: On or in compliance with the inventory Japan ISHL Listing: On or in compliance with the inventory Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory Mexico INSQ: On or in compliance with the inventory New Zealand Inventory of Chemicals: On or in compliance with the inventory Philippines PICCS: On or in compliance with the inventory On or in compliance with the inventory Taiwan Chemical Substance Inventory: On or in compliance with the inventory US TSCA Inventory: On or in compliance with the inventory EINECS, ELINCS or NLP:

16.Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

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Revision Information: Not relevant.

Version #: 1.3



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Source of information:

Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

Further Information: No data available.

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