



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.30

Section 1 - Product and Company Information

Product Name D-(+)-Galactose, minimum 99%
Product Number G0750
Brand Sigma Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052

Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
D(+)-GALACTOSE	59-23-4	No	200-416-4	

Formula C₆H₁₂O₆
Synonyms Galactose, D(+)-Galactose

Section 3 - Hazards Identification

HMIS Rating
Health: 0 Flammability: 0 Reactivity: 0

NFPA Rating
Health: 0 Flammability: 0 Reactivity: 0

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

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.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory
Wear dust mask.
Hand
Protective gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State Solid	White	Powder

Molecular Weight: 180.16 AMU

pH 5.0 - 7.0
BP/BP Range N/A

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MP/MP Range 168 - 170 °C
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
Optical Rotation Degree of Rotation:
+94 - +80 (+/- 1)

Solvent: H₂O 50 g/l

Solubility
Solubility in Water: 1 M in H₂O, 20°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.

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.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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Chronic Exposure - Teratogen

Species	Dose	Route of Application	Exposure Time
Rat	240 GM/KG	Oral	(11-22D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Rat	240 GM/KG	Oral	(11-22D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Rat	188 GM/KG	Oral	(8-10D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.			
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Rat	188 GM/KG	Oral	(8-10D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.			
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Rat	440 GM/KG	Oral	(1-22D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Rat	440 GM/KG	Oral	(1-22D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Mouse	630 GM/KG	Oral	(1-21D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.			
Mouse	630 GM/KG	Oral	(1-21D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.			

Chronic Exposure - Reproductive Hazard

Species	Dose	Route of Application	Exposure Time
Rat	475 GM/KG	Oral	(3-22D PREG)
Result: Effects on Newborn: Other postnatal measures or effects.			
Rat	475 GM/KG	Oral	(3-22D PREG)
Result: Effects on Newborn: Other postnatal measures or effects.			
Rat	1000 GM/KG	Oral	(3-22D PREG/21D POST)
Result: Effects on Newborn: Germ cell effects (in offspring).			
Rat	1000 GM/KG	Oral	(3-22D PREG/21D POST)
Result: Effects on Newborn: Germ cell effects (in offspring).			
Mouse	1260 GM/KG	Oral	(1-21D PREG)
Result: Effects on Fertility: Abortion. Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).			
Mouse	1260 GM/KG	Oral	(1-21D PREG)
Result: Effects on Fertility: Abortion. Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).			
Mouse	16500 MG/KG	Oral	(8-12D PREG)
Result: Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).			
Mouse	16500 MG/KG	Oral	(8-12D PREG)
Result: Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).			
Mouse	840 GM/KG	Oral	(14D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Effects on Fertility: Other measures of fertility			
Mouse	840 GM/KG	Oral	(14D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Effects on Fertility: Other measures of fertility			

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.

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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

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes 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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

