SAFETY DATA SHEET

1. Identification

Product Name
D(+)-Galactose

Cat No. :
AC150610000; AC150610010; AC150610050; AC150610051; AC150611000; AC150615000

Synonyms
D-Galactopyranose

Recommended Use
Laboratory chemicals

Uses advised against
No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information US call: 001-800-ACROS-01 /
Europe call: +32 14 57 52 11
Emergency Number US:001-201-796-7100 /
Europe: +32 14 57 52 99
CHEMTREC Tel. No.US:001-800-424-9300 /
Europe:001-703-527-3887

2. Hazard(s) Identification

Classification

Based on available data, the classification criteria are not met

Label Elements
None required

Hazards not otherwise classified (HNOC)
None identified

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Galactose</td>
<td>59-23-4</td>
<td>99</td>
</tr>
</tbody>
</table>
4. First-aid measures

Eye Contact
Rinse with plenty of water. Get medical attention if symptoms occur.

Skin Contact
Rinse with plenty of water. Get medical attention if symptoms occur.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

Ingestion
Do not induce vomiting. Get medical attention if symptoms occur.

Most important symptoms/effects
No information available

Notes to Physician
Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media
No information available.

Flash Point
No information available.

Method -
No information available

Autoignition Temperature
No information available.

Explosion Limits
Upper
No data available

Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

Environmental Precautions
Avoid release to the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.
8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State
Powder Solid

Appearance
White

Odor
Odorless

Odor Threshold
No information available.

pH
5.0-7 180g/l aq sol (25°C)

Melting Point/Range
165 - 168°C / 329 - 334.4°F

Boiling Point/Range
No information available.

Flash Point
No information available.

Evaporation Rate
No information available.

Flammability (solid,gas)
No information available.

Flammability or explosive limits
Upper
No data available

Lower
No data available

Vapor Pressure
negligible

Vapor Density
6.2

Relative Density
No information available.

Solubility
No information available.

Partition coefficient; n-octanol/water
No data available

Autoignition Temperature
No information available.

Decomposition temperature
No information available.

Viscosity
No information available.

Molecular Formula
C6 H12 O6

Molecular Weight
180.16

10. Stability and reactivity

Reactive Hazard
None known, based on information available.

Stability
Stable under normal conditions.

Conditions to Avoid

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Carbon monoxide (CO), Carbon dioxide (CO2)
Hazardous Polymerization: No information available.
Hazardous Reactions: None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information: No acute toxicity information is available for this product
Component Information
Toxicologically Synergistic Products: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: No information available.
Sensitization: No information available.

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
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<td>59-23-4</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects: No information available.
Reproductive Effects: No information available.
Developmental Effects: No information available.
Teratogenicity: No information available.
STOT - single exposure: None known.
STOT - repeated exposure: None known.
Aspiration hazard: No information available.
Symptoms / effects, both acute and delayed: No information available.
Endocrine Disruptor Information: No information available.

Other Adverse Effects: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity: Do not empty into drains.
Persistence and Degradability: No information available.
Bioaccumulation/ Accumulation: No information available.
Mobility: No information available.
13. Disposal considerations

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

**DOT**

Not regulated

**TDG**

Not regulated

**IATA**

Not regulated

**IMDG/IMO**

Not regulated

15. Regulatory information

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
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<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- **X** - Listed
- **E** - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- **F** - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- **N** - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- **P** - Indicates a commenced PMN substance
- **R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- **S** - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- **T** - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- **XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- **Y1** - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- **Y2** - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)**

Not applicable

**SARA 313**

Not applicable

**SARA 311/312 Hazardous Categorization**

- **Acute Health Hazard**
  - No

- **Chronic Health Hazard**
  - No

- **Fire Hazard**
  - No

- **Sudden Release of Pressure Hazard**
  - No

- **Reactive Hazard**
  - No

**Clean Water Act**

Not applicable

**Clean Air Act**

Not applicable

**OSHA Occupational Safety and Health Administration**

Not applicable
CERCLA
Not applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know
Not applicable

U.S. Department of Transportation
Reportable Quantity (RQ):
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations
Mexico - Grade
No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
Non-controlled

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 21-Apr-2014
Revision Date 21-Apr-2014
Print Date 21-Apr-2014
Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS