

Issuing Date 27-May-2010

Revision Date 08-Jan-2016

Revision Number 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name O-Nitrophenyl-B-D-Galactopyranoside

Other means of identification

Product Code(s) 0789

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use For Further Manufacturing Use Only.

Uses advised against Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

| | |
|-----------------------------|-----------------------------|
| Company Address | Manufacturer Address |
| VWR International, LLC | VWR International, LLC |
| Radnor Corporate Center | 28600 Fountain Parkway |
| 100 Matsonford Road | Solon, Ohio 44139 |
| Radnor, PA 19087-8660 | |
| Company Phone Number | 1-800-448-4442 |
| E-mail Address | info@amresco-inc.com |

Emergency Telephone Number

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Label elements

Emergency Overview

| | | |
|---|--|--------------------------------------|
| Appearance Fine white to off-white | Physical State Crystalline Powder | Odor No information available |
|---|--|--------------------------------------|

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No | EC No. | Weight % | Trade Secret |
|------------------------------------|----------|-----------|----------|----------------|
| O-Nitrophenyl-B-D-Galac topyran | 369-07-3 | 206-716-1 | 95-100 | Not applicable |

4. FIRST AID MEASURES

First Aid Measures

| | |
|--------------|--|
| Eye Contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin Contact | Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. |
| Inhalation | Move to fresh air. If not breathing, give artificial respiration. |
| Ingestion | Never give anything by mouth to an unconscious person. Rinse mouth. |

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products Carbon oxides. Nitrogen oxides (NOx).

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Ensure adequate ventilation, especially in confined areas.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Protect from light and moisture. Protect from moisture.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light. Protect from moisture.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|-----------|----------|------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - |

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Safety glasses with side-shields.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|------------------------------|--------------------------|-------------------------|--------------------------|
| Physical State | Crystalline Powder | Odor | No information available |
| Appearance | Fine white to off-white | Odor Threshold | No information available |
| Color | No information available | | |
| Property | Values | Remarks • Method | |
| pH | No information available | | |
| Melting point/freezing point | 185 - 190 °C | | |
| Boiling Point/Range | No information available | | |
| Flash Point (High in °C) | No information available | | |
| Evaporation Rate | No information available | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor Density | No information available | | |

O-Nitrophenyl-B-D-Galactopyranoside

| | |
|------------------------------|--------------------------|
| Specific Gravity | No information available |
| Water Solubility | No information available |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive Properties | No information available |
| Oxidizing Properties | No information available |

Other Information

| | |
|------------------|--------------------------|
| Softening Point | No information available |
| Molecular Weight | No information available |
| VOC Content | No information available |
| Density | No information available |
| Bulk Density | No information available |

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

| | |
|--------------|--|
| Inhalation | There is no data available for this product. |
| Eye Contact | There is no data available for this product. |
| Skin Contact | There is no data available for this product. |
| Ingestion | There is no data available for this product. |

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|-----------|-------------|-----------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - |

Information on toxicological effects**Symptoms** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization** No information available.

Mutagenic Effects

No information available.

Carcinogenicity

No information available.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--|-------|------|-----|------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - | - |

Reproductive Toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Toxicity to Fish | Crustacea |
|--|----------------------|------------------|-----------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - |

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

| Chemical Name | Partition coefficient |
|--|-----------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - |

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method

Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging

Do not re-use empty containers.

| Chemical Name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|--|------|--------------------------|------------------------|------------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - | - |

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--|--------------------------------------|------------------------|------------------------|------------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - | - |

| Chemical Name | California Hazardous Waste Status |
|--|-----------------------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - |

14. TRANSPORT INFORMATION

DOT

Not regulated

IATA

Not regulated

15. REGULATORY INFORMATION

International Inventories

| | |
|---------------|-----------------|
| TSCA | Does not comply |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Does not Comply |
| IECSC | Complies |
| KECL | Does not Comply |
| PICCS | Does not Comply |
| AICS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component | SARA 313 - Threshold Values % |
|---|-------------------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 (95-100) | - |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--|-----------------------------|------------------------|---------------------------|----------------------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - | - |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|--|--------------------------|------------------------------------|----|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - |

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

| Chemical Name | California Prop. 65 |
|---|---------------------|
| O-Nitrophenyl-B-D-Galactopyran - 369-07-3 | - |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| O-Nitrophenyl-B-D-Galactopyran 369-07-3 | - | - | - |

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Issuing Date 27-May-2010

Revision Date 08-Jan-2016

Revision Note

No information available

Disclaimer

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. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet