



SIGMA-ALDRICH

3050 Spruce Street
Saint Louis, MO, 63103 USA
Telephone: 877-744-1126
Fax: 800-325-5052
www.sigmaldrich.com

00000830

01/14/2014

LS R-7 SCHOOL DISTRICT
301 NE TUDOR RD
LEES SUMMIT MO 64086
USA

Attached please find the Material Safety Data Sheets required for your recent order(s). Please note that we deliver MSDS documents to you for hazardous materials that you have not ordered previously, or if we have made significant changes to the MSDS content since your last order. In addition, you can access our complete MSDS library at www.sigmaldrich.com. You may contact the MSDS department at 877-744-1126 or via email at msdsrequest@sial.com if you have any questions or comments.

Beginning in October 2008, we will be upgrading our computer system that produces MSDS documents. In addition to improving the overall look of our MSDS, the documents from our new system will feature improved data quality and increased regulatory data. We will be migrating our data to the new system for several months, and you will receive separate MSDS mailings from each system during this transition period. We will be sending you MSDS documents from the new system as you order those products, so that you may update your records accordingly. Please feel free to contact us with any questions or comments you may have during our transition.

Regulatory Information:

These MSDS documents are written in accordance with US OSHA Hazard Communication Standard 29 CFR 1910.1200.

Certain mixtures or trade name products that are supplied by Sigma-Aldrich, Inc., contain a toxic chemical or chemicals subject to the notification requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. This law requires certain manufacturers to report on annual emissions of specified toxic chemicals and chemical categories. Please refer to Section 15 of the MSDS document to determine if a Sigma-Aldrich product contains any SARA listed materials.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 424-9346 or (703) 412-9810. Please note that if you repackage, or otherwise redistribute, these products to industrial customers, a notice similar to this one should be sent to those customers. Additionally, this information must be permanently affixed to, and included with, all Material Safety Data Sheets that are copied and distributed for these substances.

Delivery #'s: 0846612012

PO#: MCCORMICK

I6758 ISOPROPYL B-D-THIOGALACTOPYRANOSIDE DIOX

R-7 SCHOOL DISTRICT
JAN 21 2014
BUSINESS SERVICES



SIGMA-ALDRICH

3050 Spruce Street
Saint Louis, MO, 63103 USA
Telephone: 877-744-1126
Fax: 800-325-5052
www.sigmaaldrich.com

MSDS Address Confirmation

01/14/2014

Sold-to Account#: 49844379
MSDS Recipient#: 130578

LS R-7 SCHOOL DISTRICT
301 NE TUDOR RD
LEES SUMMIT MO 64086
USA

Telephone
Fax
Email

☐ I would like to make the following change/correction to my MSDS recipient address:

☐ I would be interested in receiving my MSDS via a different delivery method:

- ☐ MSDS subscription products (CD-ROM, etc)
☐ Email (future functionality - will notify you when available)
☐ In the box with my products (future functionality - will notify you when available)

Contact name: _____ Email address: _____ @ _____
Phone#: _____ Date: _____

☐ Please discontinue MSDS mailings to the above address (*):

I hereby certify that my organization meets all applicable legal requirements for MSDS availability by alternative means, electronic or otherwise, and does not require Sigma-Aldrich to send me a paper copy of the MSDS for any products ordered from Sigma-Aldrich.

Contact name: _____ Email address: _____ @ _____
Phone#: _____ Date: _____

(*) Requires approval from Corporate Product Safety representative:

Name: _____ Email address: _____ @ _____
Signature: _____
Phone#: _____ Date: _____

Please fax completed form to 877-380-2660 or 314-286-8083 or email changes to cmmg@sial.com.

Accelerating Customers' Success through Leadership in Life Science, High Technology and Service

00004034

SIGMA-ALDRICH

Material Safety Data Sheet

Version 5.0
Revision Date 04/25/2012
Print Date 01/13/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Isopropyl β-D-1-thiogalactopyranoside
Product Number : 16758
Brand : Sigma-Aldrich
Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776 6555
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Carcinogen, Target Organ Effect

GHS Classification
Carcinogenicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)
H351

Suspected of causing cancer.

Precautionary statement(s)
P281 : Use personal protective equipment as required.

HMS Classification

Health hazard:
Chronic Health Hazard:
Flammability:
Physical hazards:

NFPA Rating

Health hazard:
Fire:
Reactivity Hazard:

Potential Health Effects

Inhalation : May be harmful if inhaled. May cause respiratory tract irritation.
Skin : May be harmful if absorbed through skin. May cause skin irritation.
Eyes : May cause eye irritation.

Sigma-Aldrich - 16758
Delivery 0946512012-000020 Purchase Order MCCORMICK

000004032

Ingestion

May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Isopropyl β-D-thiogalactoside
IPTG

Formula

: C₆H₁₄O₆S

Molecular Weight

: 236.3 g/mol

Component	Classification	Concentration
1,4-Dioxane		
CAS-No.	123-91-1	Flam. Liq. 2; Eye Irrit. 2; Carc. 2; STOT SE 3; H225, H319, H335, H351, EUH019, EUH066
EC-No.	204-681-8	
Index-No.	603-024-00-5	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

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

Special protective equipment for firefighters

Wear self-contained breathing apparatus for the fighting if necessary.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: - Carbon oxides, Sulphur oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Sigma-Aldrich - 16758
Delivery 0946512012-000020 Purchase Order MCCORMICK

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
1,4-Dioxane	123-91-1	TWA	20 ppm	USA, ACGIH Threshold Limit Values (TLV)
Remarks	Liver damage Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption			
		TWA	25 ppm 30 mg/m ³	USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation			
		TWA	100 ppm 360 mg/m ³	USA, Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Skin designation The value in mg/m ³ is approximate.			
		C	1 ppm 3.6 mg/m ³	USA, NIOSH Recommended Exposure Limits
	Potential Occupational Carcinogen See Appendix A 30 minute ceiling value			

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	no data available

Sigma-Aldrich - 16758
Delivery 0646612012-000020 Purchase Order MCCORMICK

Safety data

pH	no data available
Melting point/freezing point	105 °C (221 °F)
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Exposure to moisture.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: - Carbon oxides, Sulphur oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Sigma-Aldrich - 16758
Delivery 0646612012-000020 Purchase Order MCCORMICK

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Genetic cell mutagenicity
no data available

Carcinogenicity

IARC: 2B - Group 2B: Possibly carcinogenic to humans (1,4-Dioxane)

NTP: Reasonably anticipated to be a human carcinogen (1,4-Dioxane)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion

May be harmful if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

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

Synergistic effects

no data available

Additional Information

HTCS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. 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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards

Carcinogen, Target Organ Effect

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313.

1,4-Dioxane

CAS No.
123-91-1

Revision Date
2007-07-01

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components

1,4-Dioxane

CAS No.
123-91-1

Revision Date
2007-07-01

Pennsylvania Right To Know Components

1,4-Dioxane

CAS No.
123-91-1

Revision Date
2007-07-01

New Jersey Right To Know Components

1,4-Dioxane

CAS No.
123-91-1

Revision Date
2007-07-01

California Prop. 65 Components

Isopropyl-β-D-thiogalactopyranoside

CAS No.
367-93-1

Revision Date
2007-09-28

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Carc.

Carcinogenically

EUH019	May form explosive peroxides.
EUH065	Repeated exposure may cause skin dryness or cracking.
Eye Irrit.	Eye irritation
Fam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
STOT SE	Specific target organ toxicity - single exposure

Further information

Copyright 2012 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.
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 Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.