

# Ispropyl- $\beta$ -D-thiogalactopyranoside (IPTG)

**I1401**

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: I1401

Issue date: 27/03/2024 Revision date: 27/03/2024 Supersedes version of: 15/03/2023 Version: 3.0

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

|              |   |
|--------------|---|
| Product form | : Substance   |
| Trade name   | : Ispropyl- $\beta$ -D-thiogalactopyranoside (IPTG) |
| EC-No.       | : 206-703-0   |
| CAS-No.      | : 367-93-1  |
| Product code | : I1401   |
| Formula      | : C <sub>9</sub> H <sub>18</sub> O <sub>5</sub> S   |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

|                                  |   |
|----------------------------------|---|
| Main use category                | : Professional use  |
| Industrial/Professional use spec | : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes. |

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

#### Distributor

Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem  
The Netherlands  
T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

### 1.4. Emergency telephone number

|                  |  |
|------------------|--|
| Emergency number | : Supplier contact information:<br>+31(0)23-5319093 (M-F 09:00-17:00)<br>+31(0)6-30008100 (outside office hours) |
|------------------|--|

| Country | Organisation/Company  | Address   | Emergency number | Comment                                   |
|---------|---|---|------------------|---|
|         | World Health Organization world directory of poison centres | <a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a> |                  | Consult website for a local poison centre |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

| Name  | Product identifier                     | %         |
|---|--|-----------|
| Ispropyl- $\beta$ -D-thiogalactopyranoside (IPTG) | CAS-No.: 367-93-1<br>EC-No.: 206-703-0 | $\geq 98$ |

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Allow affected person to breathe fresh air.  
First-aid measures after skin contact : Wash skin with mild soap and water.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : - CO<sub>x</sub>. - SO<sub>x</sub>.

### 5.3. Advice for firefighters

Protection during firefighting : Wear proper protective equipment.  
Other information : Prevent fire fighting water from entering the environment.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing.  
Measures in case of dust release : Avoid dust formation.

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Do not allow to enter drains or water courses.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up dry powder and dispose properly.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Minimise generation of dust.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Keep container closed when not in use. Store in dry, cool, well-ventilated area. Light and moisture sensitive.  
Storage temperature : -25 – -15 °C

#### 7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

No additional information available

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

No additional information available

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### 8.2.2. Personal protection equipment

#### 8.2.2.1. Eye and face protection

| Eye protection |                      |                 |          |
|----------------|----------------------|-----------------|----------|
| Type           | Field of application | Characteristics | Standard |
| Safety glasses | Dust                 |                 | EN 166   |

#### 8.2.2.2. Skin protection

##### Skin and body protection:

In case of possible repeated skin contact wear protective clothing

| Hand protection |                      |                   |                |             |            |
|-----------------|----------------------|-------------------|----------------|-------------|------------|
| Type            | Material             | Permeation        | Thickness (mm) | Penetration | Standard   |
| Gloves          | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,11           |             | EN ISO 374 |

#### 8.2.2.3. Respiratory protection

| Respiratory protection |             |                 |          |
|------------------------|-------------|-----------------|----------|
| Device                 | Filter type | Condition       | Standard |
| Dust mask              | Type P1     | Dust protection | EN 143   |

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

##### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |   |
|---|---|
| Physical state                                  | : Solid                                 |
| Colour  | : White.                                |
| Appearance                                      | : Powder.                               |
| Molecular mass                                  | : 238,3 g/mol                           |
| Odour   | : Odourless.                            |
| Odour threshold                                 | : Not available                         |
| Melting point                                   | : 110 – 114 °C                          |
| Freezing point                                  | : Not available                         |
| Boiling point                                   | : Not available                         |
| Flammability                                    | : Not available                         |
| Explosive limits                                | : Not applicable                        |
| Lower explosion limit                           | : Not applicable                        |
| Upper explosion limit                           | : Not applicable                        |
| Flash point                                     | : Not applicable                        |
| Auto-ignition temperature                       | : Not applicable                        |
| Decomposition temperature                       | : Not available                         |
| pH  | : Not available                         |
| pH solution                                     | : Not available                         |
| Viscosity, kinematic                            | : Not applicable                        |
| Solubility                                      | : Soluble in ethanol. Soluble in water. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available                         |

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|                                 |                  |
|---------------------------------|------------------|
| Vapour pressure                 | : Not available  |
| Vapour pressure at 50°C         | : Not available  |
| Density                         | : Not available  |
| Relative density                | : Not available  |
| Relative vapour density at 20°C | : Not applicable |
| Particle size                   | : Not available  |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes: - COx. - SOx.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

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|               |              |
|---------------|--------------|
| LD50 oral rat | > 5000 mg/kg |
|---------------|--------------|

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Skin corrosion/irritation         | : May cause skin irritation         |
| Serious eye damage/irritation     | : May cause eye irritation.         |
| Respiratory or skin sensitisation | : May cause respiratory irritation. |
| Germ cell mutagenicity            | : Not classified                    |
| Carcinogenicity                   | : Not classified                    |
| Reproductive toxicity             | : Not classified                    |
| STOT-single exposure              | : Not classified                    |
| STOT-repeated exposure            | : Not classified                    |
| Aspiration hazard                 | : Not classified                    |

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### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance/mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### 11.2.2. Other information

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance/mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

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| ADR                                     | IMDG           | IATA           |
|---|----------------|----------------|
| <b>14.1. UN number or ID number</b>     |                |                |
| Not applicable                          | Not applicable | Not applicable |
| <b>14.2. UN proper shipping name</b>    |                |                |
| Not applicable                          | Not applicable | Not applicable |
| <b>14.3. Transport hazard class(es)</b> |                |                |
| Not applicable                          | Not applicable | Not applicable |
| <b>14.4. Packing group</b>              |                |                |
| Not applicable                          | Not applicable | Not applicable |
| <b>14.5. Environmental hazards</b>      |                |                |
| Not applicable                          | Not applicable | Not applicable |
| No supplementary information available  |                |                |

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

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### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

#### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 11134).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen –

Borstvoeding

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen –

Ontwikkeling

#### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

| Indication of changes |  |          |          |
|-----------------------|--|----------|----------|
| Section               | Changed item   | Change   | Comments |
|                       | Supersedes   | Modified |          |
|                       | Revision date  | Modified |          |
|                       | Adverse health effects caused by endocrine disrupting properties | Added    |          |
|                       | Regulatory framework   | Added    |          |
|                       | Substance type   | Added    |          |
| 1.1                   | Formula  | Modified |          |
| 3                     | Composition/information on ingredients                           | Modified |          |
| 4.3                   | Other medical advice or treatment                                | Added    |          |
| 7.1                   | Hygiene measures   | Added    |          |
| 8.2                   | Environmental exposure controls                                  | Added    |          |
| 8.2                   | Skin and body protection   | Modified |          |
| 10.3                  | Possibility of hazardous reactions                               | Added    |          |
| 10.6                  | Hazardous decomposition products                                 | Modified |          |



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| Indication of changes |  |          |          |
|-----------------------|--|----------|----------|
| Section               | Changed item   | Change   | Comments |
| 11.1                  | LD50 oral rat  | Modified |          |
| 12.6                  | Adverse effects on the environment caused by endocrine disrupting properties | Added    |          |

| Abbreviations and acronyms: |   |
|-----------------------------|---|
| ATE                         | Acute Toxicity Estimate   |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road               |
| BCF                         | Bioconcentration factor   |
| CLP                         | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008                       |
| DPD                         | Dangerous Preparations Directive 1999/45/EC   |
| DSD                         | Dangerous Substances Directive 67/548/EEC   |
| IATA                        | International Air Transport Association   |
| IMDG                        | International Maritime Dangerous Goods  |
| LC50                        | Median lethal concentration   |
| LD50                        | Median lethal dose  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |
| PBT                         | Persistent Bioaccumulative Toxic  |
| REACH                       | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| SDS                         | Safety Data Sheet   |

Data sources : ECHA (European Chemicals Agency). Supplier. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Safety Data Sheet (SDS), EU Duchefa 2023

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.