



# IPTG (Isopropyl $\beta$ -D-1-thiogalactopyranoside)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 12/08/2011

Version: 1.1

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : IPTG (Isopropyl  $\beta$ -D-1-thiogalactopyranoside)  
CAS No : 367-93-1  
Product code : R036  
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

Use of the substance/mixture : Laboratory chemical

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

G-Biosciences/ Geno Technology, Inc.  
9800 Page Avenue  
St. Louis, MO 63132-1429, USA  
Tel.1-800-628-7730  
<http://www.GBiosciences.com>

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Name	Product identifier	%	Classification (GHS-US)
IPTG (Isopropyl $\beta$ -D-1-thiogalactopyranoside) (Main constituent)	(CAS No) 367-93-1	100	Not classified

Full text of H-phrases: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)).

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

Symptoms/injuries : No data available.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media : Water spray. Alcohol-resistant foam. ABC powder. Carbon dioxide.  
Unsuitable extinguishing media : No unsuitable extinguishing media known.

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

Fire hazard : DIRECT FIRE HAZARD. Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Heating increases the fire hazard.  
Explosion hazard : DIRECT EXPLOSION HAZARD. Its dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.  
Reactivity : On burning: release of toxic and corrosive gases/vapours (sulphur oxides, carbon monoxide - carbon dioxide).

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.  
Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.  
Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Heat/fire exposure: gas-tight suit.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.  
Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.  
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

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

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills.  
Methods for cleaning up : Prevent dust cloud formation. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 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 : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Reduce/avoid exposure and/or contact. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

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

Storage temperature : < 2 °C  
Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.  
Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.  
Storage area : Store in a cool area. Provide for a cooling system. May be stored under argon. Meet the legal requirements.  
Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.  
Packaging materials : SUITABLE MATERIAL: glass.

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### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
Hand protection	: Gloves.
Eye protection	: Safety glasses. In case of dust production: protective goggles.
Skin and body protection	: Protective clothing.
Respiratory protection	: Dust formation: dust mask.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder.
Molecular mass	: 238.31 g/mol
Color	: White.
Odor	: Odourless.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 120 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Moderately soluble in water. Water: 1 g/100ml
Log Pow	: -1.26
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (sulphur oxides, carbon monoxide - carbon dioxide).

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

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### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Severe water pollutant (surface water). No data available on ecotoxicity.

### 12.2. Persistence and degradability

IPTG (Isopropyl $\beta$ -D-1-thiogalactopyranoside) (367-93-1)	
Persistence and degradability	Biodegradability in water: no data available.

### 12.3. Bioaccumulative potential

IPTG (Isopropyl $\beta$ -D-1-thiogalactopyranoside) (367-93-1)	
Log Pow	-1.26
Bioaccumulative potential	Bioaccumulation: not applicable.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
Additional information	: Can be considered as non hazardous waste according to Directive 2008/98/EC.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information	: No supplementary information available.
State during transport (ADR-RID)	: No data available.

#### Overland transport

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

No additional information available

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

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

Not classified

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

NFPA health hazard

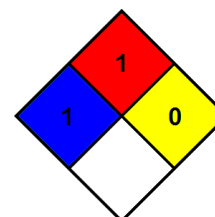
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US GENO (GHS HazCom 2012)

*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*