

Revision Date 16-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

**Product Description:** (R)-3-Hydroxy-γ-butyrolactone  
**Cat No.** 391330000; 391330010; 391330050

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

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

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

#### Company

Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** begel.sdsdesk@thermofisher.com

#### Emergency Telephone Number

For information in the US, call: 800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99  
 Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300  
 CHEMTREC Phone Number, Europe: 703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ systemic toxicity (single exposure)	Category 3

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

For the full text of the R phrases mentioned in this Section, see Section 16

**Symbol(s)** Xn - Harmful

**R -phrase(s)** none

**Risk Combination Phrases** R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed  
 R36/37/38 - Irritating to eyes, respiratory system and skin

## 2. HAZARDS IDENTIFICATION

### Label Elements



### Signal Word

### Warning

### Hazard Statements

H332 - Harmful if inhaled  
 H312 - Harmful in contact with skin  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation  
 H315 - Causes skin irritation  
 H302 - Harmful if swallowed

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P301+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### Other Hazards

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
(R)-3-HYDROXY-GAMMA-BUTYROLACTONE 58081-05-3		90	58081-05-3	Xn; R20/21/22 Xi; R36/37/38	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332)	-

For the full text of the R phrases mentioned in this Section, see Section 16

#### 4. FIRST AID MEASURES

**Description of first aid measures**

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Obtain medical attention
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes Obtain medical attention
<b>Ingestion</b>	Clean mouth with water Get medical attention
<b>Inhalation</b>	Remove from exposure, lie down Move to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration Obtain medical attention
<b>Notes to Physician</b>	Treat symptomatically

#### 5. FIRE-FIGHTING MEASURES

**Extinguishing media****Suitable Extinguishing Media**

Water spray Carbon dioxide (CO<sub>2</sub>) Dry chemical chemical foam

**Extinguishing media which must not be used for safety reasons**

No information available.

**Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors

**Advice for fire-fighters**

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**

Ensure adequate ventilation

**Environmental precautions**

Prevent further leakage or spillage if safe to do so

**Methods and material for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust) Keep in suitable and closed containers for disposal Do not let this chemical enter the environment

#### 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Avoid contact with skin and eyes Do not breathe dust Do not breathe vapors or spray mist Do not ingest

**Conditions for safe storage, including any incompatibilities**

Keep in a dry place Keep container tightly closed Keep refrigerated

**Specific End Uses**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

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

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### 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 Protection

Goggles

#### Hand Protection

Protective gloves

#### 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

### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical State

Liquid

### Appearance

No information available

### pH

No information available.

### Vapor Pressure

No information available.

### Vapor Density

No information available.

### Boiling Point/Range

140°C / 284°F @ 760 mmHg

### Melting Point/Range

No information available.

### Flash Point

No information available.

### Molecular Formula

C4 H6 O3

### Molecular Weight

102.09

## 10. STABILITY AND REACTIVITY

### Reactivity

#### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

#### Hazardous Polymerization

Hazardous polymerization does not occur.

#### Hazardous Reactions

No information available.

### Conditions to Avoid

Incompatible products.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**11. TOXICOLOGICAL INFORMATION**Information on Toxicological EffectsAcute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**Chronic Toxicity

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Developmental Effects**

No information available.

**Target Organs**

No information available.

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Endocrine Disruptor Information**

None known

**12. ECOLOGICAL INFORMATION**Toxicity

**Ecotoxicity effects** Do not empty into drains

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessmentOther adverse effects

No information available

**13. DISPOSAL CONSIDERATIONS**Waste treatment methods

**Waste from Residues / Unused** Dispose of in accordance with local regulations

**Products**

**Contaminated Packaging** Empty containers should be taken for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**IMDG/IMO

Not regulated

**14. TRANSPORT INFORMATION**

ADR Not regulated

IATA Not regulated

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories****Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**AICS** - Inventory of Chemical Substances

**KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment****16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

**Revision Date** 16-Nov-2010

**Revision Summary** Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided on this SDS 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 Safety Data Sheet