



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical name : Gamma-butyrolactone

Substance name : γ -butyrolactone

Substance No.
EC-No. : 202-509-5

CAS-No. : 96-48-0

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

Recommended use : Solvent.
Intermediate.
Laboratory chemicals
Viscosity adjusters

Restrictions on use : Cosmetics
Soluble coatings on children's toys

Details of the supplier of the safety data sheet GreenChem Industries 222 Clematis Street West Palm Beach, FL 33401 United States of America (USA) 561-659-2236 info@greenchemindustries.com	Emergency telephone number CHEMTREC: 800-424-9300 Product Information 561-659-2236
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Serious eye damage : Category 1



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Harmful if swallowed.
Causes serious eye damage.
May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
BUTYROLACTONE	96-48-0	Acute Tox. 4; H302 Eye Dam. 1; H318 STOT SE 3; H336	99.80

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
- If swallowed : Obtain medical attention.
Do NOT induce vomiting.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
effects on blood pressure



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Harmful if swallowed.
 Causes serious eye damage.
 May cause drowsiness or dizziness.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.
 Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
 nitrogen oxides (NO_x)
 Hydrocarbons
 toxic fumes
- Specific extinguishing methods :

 Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

- | | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.
Ensure adequate ventilation.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. |
| Environmental precautions | : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal. |
| Other information | : Comply with all applicable federal, state, and local regulations. |

SECTION 7. HANDLING AND STORAGE

- | | |
|-----------------------------|--|
| Advice on safe handling | : Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations. |
| Conditions for safe storage | : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Components	CAS-No.
BUTYROLACTONE	96-48-0

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.
Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Colour	: clear
Odour	: mild
Odour Threshold	: No data available
pH	: 4.5 Concentration: 10 %
Melting point/freezing point	: -47 - -44 °F / -44 - -42 °C
Boiling point/boiling range	: 400.3 °F / 204.6 °C
Flash point	: 106 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.344 hPa (20 °C)
Relative vapour density	: No data available
Relative density	: No data available
Density	: 1.124 g/cm ³ (25 °C)
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: log Pow: -0.566



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Thermal decomposition : No data available

Viscosity
 Viscosity, dynamic : 2 mPa.s (20 °C)

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
 Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : LD50 (Rat): 1,582 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Guinea pig): > 5 g/kg



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Components:

BUTYROLACTONE:

Acute oral toxicity : LD50 (Rat): 1,582 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
 Exposure time: 4 h
 Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Guinea pig): > 5 g/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Components:

BUTYROLACTONE:

Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks: May cause irreversible eye damage.

Result: Corrosive

Components:

BUTYROLACTONE:

Result: Corrosive

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Product:

Test Type: Local lymph node assay

Species: Mouse

Assessment: Does not cause skin sensitisation.

Result: negative

Components:

BUTYROLACTONE:

Test Type: Local lymph node assay

Species: Mouse

Assessment: Does not cause skin sensitisation.



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

Result: negative

Germ cell mutagenicity

Not classified based on available information.

Product:

- Genotoxicity in vitro : Test Type: Ames test
Result: negative
- : Test Type: Chromosome aberration test in vitro
Result: negative
- Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse
Result: negative

Components:

BUTYROLACTONE:

- Genotoxicity in vitro : Test Type: Ames test
Result: negative
- : Test Type: Chromosome aberration test in vitro
Result: negative
- Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse
Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Species: Rat, (male)
Application Route: Oral
NOAEL: 225 mg/kg bw/day
Result: negative
Target Organs: No specific target organs noted
GLP: yes
Remarks: No significant adverse effects were reported

Species: Rat, (female)
Application Route: Oral
NOAEL: 225 mg/kg bw/day
Result: negative
Target Organs: No specific target organs noted
GLP: yes
Remarks: Significant toxicity observed in testing

Species: Mouse, (male and female)



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Application Route: Oral
 NOAEL: 262 mg/kg bw/day
 Result: negative
 Target Organs: No specific target organs noted
 GLP: yes
 Remarks: Significant toxicity observed in testing

Components:

BUTYROLACTONE:
 Species: Rat, (male)
 Application Route: Oral
 NOAEL: 225 mg/kg bw/day
 Result: negative
 Target Organs: No specific target organs noted
 GLP: yes
 Remarks: No significant adverse effects were reported

Species: Rat, (female)
 Application Route: Oral
 NOAEL: 225 mg/kg bw/day
 Result: negative
 Target Organs: No specific target organs noted
 GLP: yes
 Remarks: Significant toxicity observed in testing

Species: Mouse, (male and female)
 Application Route: Oral
 NOAEL: 262 mg/kg bw/day
 Result: negative
 Target Organs: No specific target organs noted
 GLP: yes
 Remarks: Significant toxicity observed in testing

Reproductive toxicity

Not classified based on available information.

Product:

Effects on foetal development	: Species: Rat, male and female Strain: Sprague-Dawley Application Route: Oral Dose: 0,10,50,125,500 mg/kg bw/day Duration of Single Treatment: 21 d General Toxicity Maternal: 500 mg/kg bw/day Teratogenicity: 500 mg/kg bw/day Result: No teratogenic effects GLP: no Remarks: No significant adverse effects were reported
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SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

Components:

BUTYROLACTONE:

Effects on foetal development

: Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: Oral
Dose: 0,10,50,125,500 mg/kg bw/day
Duration of Single Treatment: 21 d
General Toxicity Maternal: 500 mg/kg bw/day
Teratogenicity: 500 mg/kg bw/day
Result: No teratogenic effects
GLP: no
Remarks: No significant adverse effects were reported

STOT - single exposure

May cause drowsiness or dizziness.

Components:

BUTYROLACTONE:

Exposure routes: Inhalation

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Product:

Species: Rat, male
NOAEL: 225 mg/kg
Application Route: Oral
Exposure time: 90-day
Method: Gavage
GLP: yes
Target Organs: No specific target organs noted

Species: Rat, female
NOAEL: 450 mg/kg
Application Route: Oral
Exposure time: 90-day
Method: Gavage
GLP: yes
Target Organs: No specific target organs noted

Species: Mouse, male and female
NOAEL: 525 mg/kg
Application Route: Oral
Exposure time: 90-day
Method: Gavage
GLP: yes



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

Target Organs: No specific target organs noted

Components:

BUTYROLACTONE:

Species: Rat, male

NOAEL: 225 mg/kg

Application Route: Oral

Exposure time: 90-day

Method: Gavage

GLP: yes

Target Organs: No specific target organs noted

Species: Rat, female

NOAEL: 450 mg/kg

Application Route: Oral

Exposure time: 90-day

Method: Gavage

GLP: yes

Target Organs: No specific target organs noted

Species: Mouse, male and female

NOAEL: 525 mg/kg

Application Route: Oral

Exposure time: 90-day

Method: Gavage

GLP: yes

Target Organs: No specific target organs noted

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 56 mg/l
 Exposure time: 96 h
 Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
 Exposure time: 48 h
- Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l
 EC10 (Desmodesmus subspicatus (green algae)): 84.4 mg/l
- Toxicity to bacteria : IC50 (Ciliate (Tetrahymena pyriformis)): 4,518 mg/l
- Ecotoxicology Assessment
 Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.
- Chronic aquatic toxicity : Not classified based on available information.

Components:

BUTYROLACTONE:

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 56 mg/l
 Exposure time: 96 h
 Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 500 mg/l
 Exposure time: 48 h
- Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l
 EC10 (Desmodesmus subspicatus (green algae)): 84.4 mg/l
- Toxicity to bacteria : IC50 (Ciliate (Tetrahymena pyriformis)): 4,518 mg/l

Persistence and degradability

Product:

- Biodegradability : Result: Readily biodegradable.
 Biodegradation: 95 %
 Exposure time: 14 d



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Components:

BUTYROLACTONE:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 95 %
 Exposure time: 14 d

No data available

Bioaccumulative potential

Components:

BUTYROLACTONE:

Partition coefficient: n-octanol/water : log Pow: -0.566 (25 °C)

No data available

Mobility in soil

Components:

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

Components:

BUTYROLACTONE:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
 Do not contaminate ponds, waterways or ditches with chemical or used container.
 Send to a licensed waste management company.
 Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Not dangerous goods

MX_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know

BUTYROLACTONE 96-48-0

New Jersey Right To Know

BUTYROLACTONE 96-48-0

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TSCA	: For Cosmetic Use Only

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 09/12/2017

NFPA: <p style="text-align: center;">Special hazard.</p>	HMIS III: <table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white; text-align: center;">HEALTH</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: red; color: white; text-align: center;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: yellow; text-align: center;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	3	FLAMMABILITY	1	PHYSICAL HAZARD	0
HEALTH	3						
FLAMMABILITY	1						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification Combustible Liquid Class IIIB

Full text of H-Statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.

Further information



SAFETY DATA SHEET

Revised: 02-15-2018

Gamma-butyrolactone

 SDS GBL
 Version: 2.0

Sources of key data used to compile the Safety Data Sheet
 GreenChem internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by GreenChem's Environmental Health and Safety Department (561-659-2236).

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration,

**SAFETY DATA SHEET**

Revised: 02-15-2018

Gamma-butyrolactone

SDS GBL
Version: 2.0

Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

