Gamma-butyrolactone

Company Information

Sunchem Co.,Ltd.

Add: A-11F, 186 Yangtzi Middle Road, Yangzhou, China.

Tel:+86 514 87851548

Fax:+86 514 87872867

Email: info@sunchemgroup.com

SECTION 1: Identification

1.1GHS Product identifier

Product name	γ-butyrolactone

1.2Other means of identification

Product number	-
Other names	γ-Butyrolactone; tetrahydrofuran-2-one; butyrolactone

1.3Recommended use of the chemical and restrictions on use

Identified uses	Industrial and scientific research use.
Uses advised against	no data available

SECTION 2: Hazard identification

2.1Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Serious eye damage, Category 1

Specific target organ toxicity – single exposure, Category 3

2.2GHS label elements, including precautionary statements

Pictogram(s)

Signal word	Danger
Hazard statement(s)	H302 Harmful if swallowed
	H318 Causes serious eye damage
	H336 May cause drowsiness or dizziness
Precautionary statement(s)	
Prevention	P264 Wash ... thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
	P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

	protection/...
	P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
	P271 Use only outdoors or in a well-ventilated area.
Response	P301+P317 IF SWALLOWED: Get medical help.
	P330 Rinse mouth.
	P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P317 Get medical help.
	P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P319 Get medical help if you feel unwell.
Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed.
	P405 Store locked up.
Disposal	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
γ-butyrolactone	γ-butyrolactone	96-48-0	202-509-5	100%

SECTION 4: First-aid measures

4.1Description of necessary first-aid measures

If inhaled

Fresh air, rest. Seek medical attention if you feel unwell.

Following skin contact

Wear protective gloves when administering first aid. Rinse skin with plenty of water or shower.

Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.

Following ingestion

Rinse mouth. Refer for medical attention .

4.2Most important symptoms/effects, acute and delayed

no data available

4.3Indication of immediate medical attention and special treatment needed, if necessary

no data available

SECTION 5: Fire-fighting measures

5.1Suitable extinguishing media

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

5.2Specific hazards arising from the chemical

Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion on contact with incompatible substances. See Chemical Dangers.

5.3Special protective actions for fire-fighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

SECTION 6: Accidental release measures

6.1Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.2Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

7.1Precautions for safe handling

NO open flames. NO contact with incompatible materials: See Chemical Dangers Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2Conditions for safe storage, including any incompatibilities

Store only in original container. Separated from acids, alcohols, amines, bases and oxidants. Dry. Well closed. Store in an area without drain or sewer access.

SECTION 8: Exposure controls/personal protection

8.1Control parameters

Occupational Exposure limit values

MAK skin absorption (H)

Biological limit values

no data available

8.2Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	colourless oily liquid
Colour	no data available
Odour	no data available
Melting point/freezing point	57°C(lit.)
Boiling point or initial boiling point and boiling range	75°C/41mmHg(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	101°C(lit.)
Auto-ignition temperature	455°C
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	In water: MISCIBLE
Partition coefficient n-octanol/water	-0.64
Vapour pressure	1.5 mm Hg (20 °C)
Density and/or relative density	1.12 g/mL at 25 °C(lit.)
Relative vapour density	3 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1Reactivity

no data available

10.2Chemical stability

no data available

10.3Possibility of hazardous reactions

Reacts with acids, bases, alcohols, amines and oxidants. This generates fire and explosion hazard. Decomposes on burning. This produces irritating fumes.

10.4Conditions to avoid

no data available

10.5Incompatible materials

no data available

10.6Hazardous decomposition products

no data available

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance is severely irritating to the eyes. Ingestion could cause effects on the central nervous system. This may result in excitement and central nervous system depression. Exposure at high concentrations could cause respiratory failure, convulsions and unconsciousness. See Notes.

STOT-repeated exposure

no data available

Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

SECTION 12: Ecological information

12.1Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2Persistence and degradability

no data available

12.3Bioaccumulative potential

no data available

12.4Mobility in soil

no data available

12.5Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.2UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.3Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.4Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6Special precautions for user

no data available

14.7Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

15.1Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
γ-butyrolactone	γ-butyrolactone	96-48-0	202-509-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

SECTION 16: Other information

Information on revision

Creation Date July 15, 2019

Revision Date July 15, 2019

Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average

- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/

Other Information

Use of alcoholic beverages enhances the harmful effect.