

 **MATERIAL SAFETY DATA SHEET**

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PRODUCT: GAMMA BUTYROLACTONE

PRODUCT NAMES: Gamma butyrolactone

OTHER NAMES: GBL

UN NUMBER: Not applicable

DANGEROUS GOODS:

HAZCHEM CODE: Not applicable

CLASS & SUB RISK: Not applicable

PACKAGING GROUP: Not applicable

POISONS SCHEDULE: Not applicable

USES: Plasticiser in food packaging, pharmaceutical fields, solvent.

STATEMENT OF HAZARDOUS NATURE:

Not classified as hazardous according to criteria of Worksafe Australia

PHYSICAL DESCRIPTION/PROPERTIES:

APPEARANCE/ODOUR	:	Colourless oily liquid, mild odour.
BOILING POINT	:	205°C
MELTING POINT	:	-43.5°C
FLASH POINT	:	98°C (Open cup), 104°C (DIN51758)
DENSITY	:	1130 kg/m ³ at 20°C
VAPOUR PRESSURE	:	<1.5 at 20°C
VAPOUR DENSITY	:	3 (air = 1)
VISCOSITY	:	1.9 mPa.s at 20°C
WATER SOLUBILITY	:	Miscible
AUTOIGNITION TEMP.	:	455°C (DIN51794)
OTHER PROPERTIES		
Log P octanol/water	:	0.64 at 20°C
Flammable limits – lower (%)	:	>1.4%
Flammable limits – upper (%)	:	<16%

INGREDIENTS:

CHEMICAL ENTITY	CAS No.	PROPORTION
Gamma-butyrolactone	96-48-0	100%

1. HEALTH HAZARD INFORMATION**Health Effects:****Swallowed**

Harmful. May cause burns or irritation of the lining of the mouth, throat, and gastrointestinal tract.

Eyes

Irritating to eyes.

Skin

Irritating to skin.

Inhaled

Inhalation of mists or vapours may cause respiratory irritation.

2. FIRST AID**Swallowed**

Rinse mouth. If large quantity swallowed, give lukewarm water (500 ml) if victim completely conscious. Never induce vomiting and never administer anything by mouth. Take to hospital.

MATERIAL SAFETY DATA SHEET**PRODUCT: GAMMA BUTYROLACTONE****Eyes**

Flush with lukewarm water for 15 minutes. Retract eyelids often. Seek medical advice immediately.

Skin

Remove contaminated clothing and shoes. After contact with skin, wash immediately with plenty of water. Seek medical attention if ill effect or irritation develops.

Inhaled

Remove victim to fresh air and allow to rest. If breathing difficulties occur, give oxygen. Seek medical advice.

Toxicity Data:

Toxicity by ingestion LD50 (mg/kg) : 1540 (rat)

Carcinogenicity

This agent is not classifiable as to its carcinogenicity to humans. Inadequate evidence of carcinogenicity in animals.

Other

Effects to the central nervous system result from the action of gamma-hydroxybutyric acid, a metabolite of GBL.

3. PRECAUTIONS FOR USE**Exposure standards**

An exposure standard has not been established for this product.

Engineering controls

Ensure workplace is well ventilated. Breathing must be protected when decanting large quantities of product without local exhaust ventilation.

Personal protection

Protective goggles

Protective gloves

Use self-contained breathing apparatus

Protective clothing

Environment

If the compound comes in contact with water: it may significantly volatilise from water to the atmosphere. It is in dynamic equilibrium with its free acids.

If the compound is released to the atmosphere: it is expected to undergo a gas-phase reaction with photochemically produced hydroxyl radicals. Possible atmospheric removal by wet deposition.

If the compound is released to soil: it may significantly volatilise from both dry and moist soil to the atmosphere.

Personal protection comments

Employ good hygiene practices when using. Wash hands thoroughly after handling.

A safety shower and eyewash fountain should be available in all work areas.

Flammability

Not flammable under normal conditions of use.

4. SAFE HANDLING INFORMATION**Storage conditions**

Keep tightly closed in a dry and cool place. Keep away from sources of ignition. Keep in a well-ventilated area. The compound attacks concrete vigorously. Not subject to hazardous substances labelling.

Spills & disposal

Contain and clean up any spills as soon as possible, using an inert absorbent material. Sweep or shovel into appropriate container for disposal. Dilute residues and flush. Spray into a furnace. Incineration will become easier if mixed with a more flammable solvent. Ensure effluent complies with applicable regulations.

MATERIAL SAFETY DATA SHEET**PRODUCT: GAMMA BUTYROLACTONE****Fire/Explosion Hazard**

Dry powder, foam, CO₂ and water mist can be used. When heated to decomposition carbon monoxide and carbon dioxide. In case of fire, wear self-contaminated breathing apparatus. This product is not flammable. Stable under normal to high conditions. Avoid strong oxidisers, strong acids and bases, strong reducing agents. May decompose on contact with moist air or water. Volatile with steam.

Risk and Safety Phrases

R22 – Harmful if swallowed.

R36 – Irritating to eyes.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 – Wear eye/face protection.

CONTACT POINT: Emergency response No. 0419 341 095 (all hours)

DISCLAIMER: The information given in this data sheet is based on data supplied by the manufacturer and is, to the best of our knowledge, true and accurate, but any recommendations or suggestions that may be made are without guarantee, since the conditions of use are beyond our control. The information and recommendations offered are for the user's consideration and it is the user's responsibility to satisfy themselves that they are suitable and complete for this particular purpose. We recommend that the safety and handling information presented in this data sheet be passed on, in an appropriate format, to your customers and handlers.