

Material Safety Data Sheet

gamma-Butyrolactone, 99+%

ACC# 63860

Section 1 - Chemical Product and Company Identification

MSDS Name: gamma-Butyrolactone, 99+%**Catalog Numbers:** AC108130000, AC108130010, AC108130025, AC108130250, AC108135000, AC9480150**Synonyms:** GBL; Dihydro-2(3H)-furanone; 1,2-Butanolide; 1,4-Butanolide; 4-Hydroxybutanoic acid lactone; gamma-Hydroxybutyric acid lactone.**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01**For emergencies in the US, call CHEMTREC:** 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
96-48-0	gamma-Butyrolactone	>99	202-509-5

Hazard Symbols: XN**Risk Phrases:** 40

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Hygroscopic (absorbs moisture from the air). **Caution!** The toxicological properties of this material have not been fully investigated. May cause eye, skin, and respiratory tract irritation.

Target Organs: No data found.**Potential Health Effects****Eye:** May cause eye irritation.**Skin:** May cause skin irritation.**Ingestion:** May cause digestive tract disturbances. The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.**Chronic:** No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Antidote: None reported.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Flash Point: 98 deg C (208.40 deg F)

Autoignition Temperature: 455 deg C (851.00 deg F)

Explosion Limits, Lower: 3.60 vol %

Upper: 16.00 vol %

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
gamma-Butyrolactone	none listed	none listed	none listed

OSHA Vacated PELs: gamma-Butyrolactone: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: Mild caramel odor

pH: Not available.

Vapor Pressure: 1.5 hPa @ 20 C

Vapor Density: 3.0

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 204 - 205 deg C

Freezing/Melting Point: -45 deg C

Decomposition Temperature: Not available.

Solubility: Miscible.

Specific Gravity/Density: 1.1200g/cm³

Molecular Formula: C₄H₆O₂

Molecular Weight: 86.09

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents - strong acids - strong bases - strong reducing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 96-48-0: LU3500000

LD50/LC50:

CAS# 96-48-0:

Dermal, guinea pig: LD50 = >5 gm/kg;

Draize test, rabbit, skin: 500 uL Severe;
 Inhalation, rat: LC50 = >5100 mg/m³/4H;
 Oral, mouse: LD50 = 1460 mg/kg;
 Oral, rat: LD50 = 1540 mg/kg;

Carcinogenicity:

CAS# 96-48-0:

IARC: IARC Group 3 - not classifiable

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: None reported.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US FEDERAL**TSCA**

CAS# 96-48-0 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 96-48-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN

Risk Phrases:

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 39 Wear eye/face protection.

WGK (Water Danger/Protection)

CAS# 96-48-0: 1

Canada - DSL/NDSL

CAS# 96-48-0 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List**Exposure Limits**

Section 16 - Additional Information

MSDS Creation Date: 10/21/1998

Revision #2 Date: 2/07/2003

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