



Minimum Purity: 98.0%

Additives: None

SYNONYM(S)

2H-Pyran-2-one, 6-butyltetrahydro-  
5-Hydroxynonanoic acid, delta-lactone  
5-Nonanolide  
5-n-Butyl-d-valerolactone  
6-Butyltetrahydro-2H-pyran-2-one  
delta-Butyl-delta-valerolactone  
delta-Butylvalerolactone

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SECTION 4. FIRST-AID MEASURES

INHALATION EXPOSURE: Remove to fresh air. Give oxygen and call a physician.

EYE CONTACT: Flush with water for 15 min. Seek medical help if necessary.

SKIN CONTACT: Wash area well with water. Seek medical help if necessary.

INGESTION: Administer water and call a physician or poison control center immediately. Do not induce vomiting.

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SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

CO2, FOAM, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES

Use standard fire fighting procedures.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Standard absorbents can be used.

WASTE DISPOSAL METHOD: Incineration or sanitary landfill in accordance with local, state, and federal regulations.

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SECTION 7. HANDLING AND STORAGE

HANDLING

Observe all warnings and precautions listed for the product.

Use in accordance with good manufacturing and industrial hygiene practices. Use product in a properly ventilated work area. Do not eat, drink or smoke while handling product.

STORAGE

Packaging: Glass, Plastic, Aluminum or Phenolic Lined Steel

Store tightly sealed under inert gas in a cool, well-ventilated area.

FIRE PROTECTION

Keep away from heat, sparks, and open flame.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Local exhaust preferred. General ventilation required.  
RESPIRATORY: Usually not required. Avoid inhaling concentrated vapors.  
SKIN: Avoid skin contact. Use chemical resistant gloves.  
EYES: Splash-proof safety glasses or goggles.  
OTHER PROTECTIVE EQUIPMENT: Safety shower, eye wash

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid  
APPEARANCE: colorless to pale yellow liquid  
ODOR DESCRIPTION: coconut, creamy character.  
BOILING POINT: 267.02 C (EPI 4.0)  
VAPOR PRESSURE : 0.0067 mmHg (20C, EPI 4.0)  
VAPOR DENSITY (Air = 1): > 1  
SPECIFIC GRAVITY @ 25C (water = 1): 0.9800:0.9860  
SOLUBILITY IN WATER: Insoluble in water; soluble in alcohol.  
FLASH POINT (CC): 230 F 110 C  
LOGP : 2.080

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## SECTION 10. STABILITY AND REACTIVITY

### INCOMPATIBILITIES

CONDITIONS TO AVOID: Presents no special reactivity hazard.

MATERIALS TO AVOID: Strong oxidizing agents

### HAZARDOUS COMBUSTION PRODUCTS

CO, CO2, water

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## SECTION 11. TOXICOLOGICAL INFORMATION

### ACUTE EFFECTS

Most likely route of entry is through the skin.

Full strength may be irritating to skin and eyes.

### IRRITATION DATA

10% in petrolatum produced no irritation or sensitization in humans.

### TOXICITY DATA

LD50 Dermal (rabbit) > 5 g/kg. For similar delta-Decalactone.

LD50 Dermal (rabbit) > 5 g/kg. For similar delta-Octalactone.

LD50 Oral (rat) > 5 g/kg. For similar delta-Decalactone.

LD50 Oral (rat) > 5 g/kg. For similar delta-Octalactone.

S. typhimurium strains TA97a, TA98, TA100, TA102, TA1535 with and without S9: No effects, dosed up to 5 mg/plate. Vehicle dimethyl sulfoxide. For similar delta-Decalactone.

THRESHOLD LIMIT VALUE (TLV): Not established

OSHA PERMISSABLE EXPOSURE LIMIT (PEL): Not established

LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA?: NO

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## SECTION 12. ECOLOGICAL INFORMATION

### GENERAL

Prevent contamination of soil, ground- and surface water.

### ECOTOXIC EFFECTS

Acute toxicity EC50 Freshwater Daphnia magna: 48 hours 50.7 mg/l 95% confidence interval of 44.7-57.5 mg/l. For similar delta-Decalactone. Biodegradation test (OECD 301B): 10 mg/l readily and ultimately biodegradable. 97.7% biodegradation after 28 days. For similar material delta-Decalactone.

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SECTION 13. DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Incineration or sanitary landfill in accordance with local, state, and federal regulations.

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SECTION 14. TRANSPORT INFORMATION

	Class	Pack Group	Sub. Risk	UN No.
Road(U.S.-DOT):	not regulated.			
Air (IATA):	not regulated.			
Sea (IMDG):	not regulated.			

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SECTION 15. REGULATORY INFORMATION

REVIEWS, STANDARDS, AND REGULATIONS

This chemical is listed on the following inventories:  
TSCA AICS CHINA DSL ECL EINECS(221-974-5) ENCS PICCS  
LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA?: NO

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SECTION 16. OTHER INFORMATION

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