

**I. PRODUCT AND COMPANY IDENTIFICATION**

Company:	Natural Advantage, LLC	Address:	1050 Cypress Creek Road Oakdale, Louisiana 71463
Telephone:	318-215-1456	Fax:	318-335-1579
Product Name:	gamma-Undecalactone, Natural	Chemical Name:	5-Heptyldihydro-2(3H)-furanone
Product Number:	NA3091		

<b>EMERGENCY 24 HOUR CONTACT: ChemTrec</b>	<b>1-800-424-9300 Contract # 219030</b>
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**II. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]  
Chronic aquatic toxicity Category C3

**NFPA Hazard Rating:** Health: 1 Fire: 1 Reactivity: 0

**Labeling according to Regulation (EC) No 1272/2008 [CLP]:**

**Pictogram:**  
None

**Signal word:** Warning  
**Hazard statement:**  
H412 Harmful to aquatic life with long lasting effects

**Precautionary statements:**

P273 Avoid release to the environment  
P501 Dispose of contents/container to an approved waste disposal plant.

**III. COMPOSITION/INFORMATION ON INGREDIENTS**

Product Name:	gamma-Undecalactone, Natural	Chemical Name:	5-Heptyldihydro-2(3H)-furanone
Synonyms:	Peach Lactone; Peach aldehyde	CAS#:	104-67-6
Formula:	C <sub>11</sub> H <sub>20</sub> O <sub>2</sub>	EINECS#:	203-225-4
Molecular Wt.:	184.28 g/mol		

**IV. FIRST AID MEASURES**

Inhalation	Remove from the exposure to fresh air. Contact a physician as necessary. If breathing is irregular or has stopped, start resuscitation and administer oxygen if available.
Eye Contact	Flush immediately with clean water for at least 15 minutes. Contact a physician if irritation persists.
Skin Contact	Remove any contaminated clothing or shoes. Wash affected areas thoroughly with soap and water. If irritation persists, contact a physician.
Ingestion	Do NOT induce vomiting. Give water to dilute. Contact a physician immediately.

**V. FIRE-FIGHTING MEASURES**

Flashpoint (Method Used):	>110°C (>230°F) (CC)
Lower Flammable Limit (% by Volume):	Information Not Applicable
Upper Flammable Limit (% by Volume):	Information Not Applicable
Extinguishing Media:	Water spray, Alcohol-resistant foam, dry chemical or carbon dioxide
Special Fire Fighting Procedures:	Self-contained breathing apparatus and protective clothing should be worn when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None
<b>NFPA Hazard Rating:</b>	Health: 1 Fire: 1 Reactivity: 0

**VI. ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled.	Eliminate all ignition sources. Ventilate area. Contain spill and recover free product. Report spill to appropriate authorities if required.
Waste Disposal Method	Place material into sealed containers and dispose of in accordance with current applicable laws and regulations.

**VII. PRECAUTIONS FOR SAFE HANDLING AND USE**

Precautions to be taken in handling and storing.	Avoid inhalation and contact with skin and eyes. Good personal hygiene practices should be used. Wash after any contact, before breaks and meals, and at the end of the work period. Contaminated clothing and shoes should be cleaned before re-use. Good manufacturing practices dictate that an eyewash fountain and/or safety shower should be available in the work area.
Other Precautions:	None.

**VIII. CONTROL MEASURES**

Occupational Exposure Limits	Does not contain materials with occupational exposure limits.
Respiratory Protection:	None generally required. If desired use NIOSH approved respirator.
Ventilation:	Local exhaust meeting ACGIH criteria as needed.
Protective Gloves:	Use chemical resistant gloves.
Protective Eyewear:	Use splash goggles or face shield when eye contact might occur.
Other Protective Clothing or Equipment:	None required.

**IX. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point:	297°C (566°F) @ 760 mm Hg	Specific Gravity (H <sub>2</sub> O = 1):	0.9234 - 0.9634
Vapor Pressure (mm Hg):	Information Not Available	Flash Point:	>110°C (>230°F)
Vapor Density (AIR =1):	> 1.0	Melting Point:	Information Not Available
Solubility in Water:	Insoluble	Evaporation Rate:	Information Not Available
pH:	Information Not Available	Color:	Colorless to Slightly Yellow
Flammability (solid, gas):	Information Not Available	Oxidizing properties:	Information Not Available
Upper/lower flammability or explosive limits:	Information Not Available	Odor:	Fruity, Peach-like
Autoignition temperature:	Information Not Available	Partition coefficient:	Information Not Available
Viscosity:	Information Not Available	Decomposition temperature:	Information Not Available
Appearance:	Clear Liquid	Explosive properties:	Information Not Available

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**X. REACTIVITY DATA**

Stability:	Chemically Stable under recommended storage conditions.	Conditions to Avoid: Excess Heat.
Incompatibility with other Substance (Materials to Avoid):	Strong Bases.	
Hazardous Decomposition or Byproducts:	Carbon Oxides form under fire conditions.	
Hazardous Polymerization:	No	

**XI. TOXICOLOGICAL INFORMATION**

Acute toxicity: LD50 Oral - Rat - 18.5 g/kg			
Serious eye damage/eye irritation:	Serious irritation	Skin corrosion/irritation:	May be harmful
Germ cell mutagenicity:	Information Not Available	Respiratory or skin sensitization:	May be harmful
Specific target organ toxicity (single exposure):	Information Not Available	Reproductive toxicity:	Information Not Available
Aspiration hazard:	May be harmful	Specific target organ toxicity (repeated exposure):	Information Not Available
Carcinogenicity:	gamma-Undecalactone is not listed as carcinogenic by IARC, ACGIH, NTP, or OSHA.		

**XII. ECOLOGICAL INFORMATION**

Toxicity:	LC50 - Rainbow Trout - 569 mg/l - 96h EC50 - Water Flea - 17.0 mg/l - 48h	Persistence and Degradation:	Information Not Available
Bioaccumulative potential:	Information Not Available	Mobility in soil:	Information Not Available
PBT and vPvB assessment:	Information Not Available	Other adverse effects:	Information Not Available

**XIII. DISPOSAL CONSIDERATIONS**

Product:	Observe all federal, state, and local environmental regulations in disposing this material.
Contaminated packaging:	Dispose of as unused product.

**XIV. TRANSPORTATION INFORMATION**

DOT (US) Proper Shipping Name:	UN Number: Not Regulated Information Not Applicable	Class: Information Not Applicable Marine pollutant: No	Packing Group: Information Not Applicable Poison Inhalation Hazard: No
IMDG Proper Shipping Name:	UN Number: Not Regulated Information Not Applicable	Class: Information Not Applicable Marine pollutant: No	Packing Group: Information Not Applicable
IATA Proper Shipping Name:	UN Number: Not Regulated Information Not Applicable	Class: Information Not Applicable	Packing Group: Information Not Applicable

**XV. REGULATORY INFORMATION**

OSHA Hazards	Irritant
US Federal	TSCA: CAS# 104-67-6 is listed on the TSCA Inventory California Prop. 65: This product does not contain any chemicals known to cause cancer, birth defects, or any other reproductive harm.
SARA 311/312	Acute Health Hazard
Regulation	Complies with EC 1272/2008.

**XVI. OTHER INFORMATION**

MSDS Creation Date:	11/07/2012
MSDS Revision #:	3
Revision Date:	04/26/2019
Liability Statement:	The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Natural Advantage, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.

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