


Section 1: Identification

Common Name/Trade Name	LEVOCARNITINE USP	
Supplier Information	Letco Medical, LLC 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	IN CASE OF EMERGENCY: Chemtrec 1 (800) 424-9300 (24 hours)
Product Synonym(s)	(R) -3-carboxy-2-hydroxypropyl trimethylammonium hydroxide	
Relevant Use(s) of Product	Manufacture or Compounding of Substances	

Section 2: Hazards Identification

Classification of Substance or Mixture	Acute toxicity, Oral (Category 3)	
Signal Word	Warning	
Hazard Statement(s)	H315 H320 H335	Causes skin irritation Causes eye irritation May cause respiratory irritation
Pictogram(s)		
Precautionary Statement(s)	N/A	
Hazards Not Otherwise Classified	No data available	
Ingredient(s) with Unknown Toxicity	No data available	

Section 3: Composition/Information on Ingredients

Chemical Name	(R) -3-carboxy-2-hydroxypropyl trimethylammonium hydroxide
Common Name	L-Carnitine Base
CAS Number	541-15-1
Impurities and/or Stabilizing Additives	No data available

Section 4: First Aid Measures

General Advice	No data available
If Inhaled	Obtain medical attention. Remove patient from exposure. Give oxygen if breathing difficult. Apply artificial respiration if necessary.
In Case of Skin Contact	Obtain medical attention. Remove contaminated clothing and wash affected skin with water or soap and water.
In Case of Eye Contact	Obtain medical attention. If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes. Hold eyelids apart.
If Swallowed	Obtain medical attention. If swallowed, rinse mouth with water. (Only if person is conscious).
Most Important Symptoms and Effects	No data available

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Extinguish with water spray, dry chemical, carbon dioxide or alcohol foam. Do not use water jet.
Special Hazards Arising From the Substance/Mixture	Combustible. Nitrogen oxides.
Special PPE and/or Precautions for Firefighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Put on protective clothing. Avoid inhalation of dust.
Methods and Materials Used for Containment	Vacuum or sweep up spilled material, but avoid making dust. Transfer to a closed container for recycling or disposal. To be disposed of as hazardous waste. Consult an accredited waste disposal contractor or the local authority for advice.
Cleanup Procedures	Vacuum or sweep up spilled material, but avoid making dust. Transfer to a closed container for recycling or disposal. To be disposed of as hazardous waste. Consult an accredited waste disposal contractor or the local authority for advice. Do not allow to enter drains, sewers or watercourses.

Section 7: Handling and Storage

Precautions for Safe Handling	Avoid contact with skin and eyes. Avoid inhalation of dusts. Follow the principles of good occupational hygiene to control personal exposures. Dispose of empty containers safely.
Conditions for Safe Storage	Keep container tightly closed, dry and in a cool well-ventilated place. Keep away from heat and sources of ignition. Keep away from oxidizing agents. Keep at a temperature not exceeding 25 °C. Stable at ambient temperatures.

Section 8: Exposure Controls/Personal Protection

Components with Workplace Control Parameters	WEL: Workplace Exposure Limit (UK HSE EH40) LTEL (8hr TWA mg/m3) 10 mg/m3 (Respirable Dust) LTEL (8 hr TWA mg/m3) 4mg/m3 (Inhalable Dust)
Appropriate Engineering Controls	PVC apron or other light protective clothing and boots. Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.
PPE - Eye/Face Protection	Safety spectacles. Minimum standard EN 166.
PPE - Skin Protection	Plastic or rubber gloves.
PPE - Body Protection	PVC apron or other light protective clothing and boots. Provide adequate ventilation to ensure that occupational exposure is not exceeded. Plastic or rubber gloves.
PPE - Respiratory Protection	Half-face particle respirator (EN 143).

Section 9: Physical and Chemical Properties

Appearance	Form: Crystalline Colour: White
Upper/Lower Flammability or Explosive Limits	No data available
Odor	No data available
Vapor Pressure	(25 degC) 1.48E-8Pa calculated (2)
Odor Threshold	No data available
Vapor Density	No data available
pH	5-9 (5%solution) (1)
Relative Density	No data available
Melting Point/Freezing Point	188 °C calculated (2)
Solubility	Solubility: Water Other Solubility in: Ethanol
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (Solid, Gas)	No data available
Partition Coefficient	Log Kow=5.48 calculated (2)
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available

Section 10: Stability and Reactivity

Reactivity	No data available
Chemical Stability	Stable under normal conditions. Protect from moisture.
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	No data available
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Nitrogen oxides.

Section 11: Toxicological Information

Acute Toxicity - LD50 Oral	LD50 Oral >5000 mg/kg (Oral-rat) L-carnitine tartrate (3)
Acute Toxicity - Inhalation	Unlikely to be hazardous by inhalation unless present as a dust.
Acute Toxicity - Dermal	No data available
Acute Toxicity - Eye	Dust has irritant effect on eyes.
Skin Corrosion/Irritation	Dust may cause irritation
Serious Eye Damage/Irritation	Dust has irritant effect on eyes.
Respiratory or Skin Sensitization	Unlikely to be hazardous by inhalation unless present as a dust.
Germ Cell Mutagenicity	No data available
Carcinogenicity IARC	Do not list this product as a known or suspected carcinogen by IARC.
Carcinogenicity ACGIH	Do not list this product as a known or suspected carcinogen by ACGIH.
Carcinogenicity NTP	Do not list product as a known or suspected carcinogen by NTP.
Carcinogenicity OSHA	Do not list this product as a known or suspected carcinogen by OSHA.
Reproductive Toxicity	Substance is not predicted to be a mutagen or toxic to reproduction.
Specific Target Organ Toxicity - Single Exposure	No data available
Specific Target Organ Toxicity - Repeated Exposure	No data available
Aspiration Hazard	No data available

Section 12: Ecological Information

Toxicity	Acute Toxicity to Fish (96 hrs) Not available Daphnia magna (48 hrs) Not available Algae (72 hrs) EC50= 1042 mg/l (Selanastrum) (calculated) (2) (4). Effect on Effluent Treatment: Unlikely to have an effect on effluent treatment systems.
Persistence and Degradability	No data available
Bio-accumulative Potential	No data available
Mobility in Soil	No data available
Other Adverse Effects	No data available

Section 13: Disposal Considerations

Waste Treatment Methods Product	This material and its container must be disposed of as hazardous waste. Incinerate under approved controlled conditions, using incinerators suitable for the disposal of NOxious chemical waste. Consult a accredited waste disposal contractor or the local authority for advice regarding final disposal.
Waste Treatment Methods Packaging	This material and its container must be disposed of as hazardous waste. Incinerate under approved controlled conditions, using incinerators suitable for the disposal of NOxious chemical waste. Consult a accredited waste disposal contractor or the local authority for advice regarding final disposal.
Special Precautions Landfill or Incinerations	No data available
Other Information	No data available

Section 14: Transport Information

UN Number	Not dangerous goods
UN Proper Shipping Name	N/A
Transport Hazard Class(es)	N/A
Packaging Group	N/A
Environmental Hazards	N/A

Section 15: Regulatory Information

Risk Phrases R36/37/38: Irritating to eyes, respiratory system and skin. Category 2 Warning: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Section 16: Other Information

Additional Information	
Prepared By	Lisa Russell
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