

# MATERIAL SAFETY DATA SHEET

<b>NFPA</b>	<b>HMIS</b>	<b>Personal Protective Equipment</b>						
	<table border="1" style="margin: auto;"> <tr><td style="background-color: #0056b3; color: white;">Health Hazard</td><td style="text-align: center;">2</td></tr> <tr><td style="background-color: #ff0000; color: white;">Fire Hazard</td><td style="text-align: center;">1</td></tr> <tr><td style="background-color: #ffff00; color: black;">Reactivity</td><td style="text-align: center;">0</td></tr> </table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							
See Section 8.								

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Product code:</b>	L1241
<b>Product Name:</b>	LEVORPHANOL TARTRATE (CII), USP
<b>Chemical Name:</b>	Morphinan-3-ol, N-methyl-, D-tartrate, dihydrate (1:1), (-)-
<b>Synonyms:</b>	(-)-17-Methylmorphinan-3-ol tartrate dihydrate (-)-3-Hydroxy-N-methylmorphinan tartrate dihydrate l-3-Hydroxy-N-methylmorphinan, D-tartrate, dihydrate Levorphanol tartrate dihydrate Morphinan-3-ol, 17-methyl-, (2S,3S)-2,3-dihydroxybutanedioate (1:1) (salt), dihydrate Morphinan-3-ol, 17-methyl-, (S-(R*,R*)))-2,3-dihydroxybutanedioate (1:1) (salt), dihydrate
<b>Recommended use:</b>	No information available.
<b>CAS #:</b>	5985-38-6; 125-72-4 (anhydrous)
<b>Formula:</b>	C17-H23-N-O.C4-H6-O6.2H2O
<b>RTECS #</b>	QD1924200; QD1925000 (anhydrous)
<b>CI#:</b>	Not available
<b>Supplier:</b>	Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000
<b>Emergency Telephone Number:</b>	CHEMTREC: 1-800-424-9300
<b>Contact Person:</b>	Martin LaBenz (West Coast)
<b>Contact Person:</b>	Chris Terpak (East Coast)

## 2. HAZARDS IDENTIFICATION

<b>EMERGENCY OVERVIEW</b>			
WARNING!. Harmful if swallowed. May be habit forming. May cause skin and eye irritation. May cause irritation of respiratory tract.			
<b>Odor:</b> None.	<b>Physical state:</b> Solid.	<b>Appearance:</b> Powder. Crystalline powder.	<b>Color:</b> White. Off-white.

## 2. HAZARDS IDENTIFICATION

**OSHA Regulatory Status** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### POTENTIAL HEALTH EFFECTS

**Principal Routes of Exposure:**

Ingestion. Inhalation.

**Acute Potential Health Effects:**

**Skin Contact:**

May cause skin irritation.

**Eye Contact:**

Contact with eyes may cause irritation.

**Inhalation:**

May cause irritation of respiratory tract.

**Ingestion:**

Harmful if swallowed.. May cause nausea and vomiting. May cause abdominal pain. May cause constipation. May cause central nervous system effects. May affect the cardiovascular system. May affect respiration. It may affect the kidneys. May affect the blood.

**Chronic Potential Health Effects:**

**Target Organs:** Central nervous system.

**Carcinogen Status:** No information available

**Mutagenic Effects:** May affect genetic material

**Teratogenic Effects:** May cause birth defects (teratogenic effects) based on animal test data. Showed teratogenic effects in animal experiments. There are no adequate and well-controlled studies in humans.. No data in humans was available to evaluate the effects of exposure on development.

**Aggravated Medical Conditions:** Hypersensitivity to material, Bronchial asthma or other respiratory impairment, Inflammatory bowel disease, Active alcoholism, Diarrhea associated with pseudomembranous colitis or caused by poisoning.

See Section 11 for additional Toxicological Information

### POTENTIAL ENVIRONMENTAL EFFECTS

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Levorphanol Tartrate	5985-38-6	100

## 4. FIRST AID MEASURES

<b>General Advice:</b>	Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.
<b>Eye Contact:</b>	Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. <b>WARNING!</b> It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
<b>Ingestion:</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Toxic if swallowed. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
<b>Notes to Physician:</b>	Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

### Flammable Properties

<b>Flashpoint (°C/°F):</b>	Not applicable.
<b>Lower Explosion Limit (%):</b>	No information available
<b>Upper Explosion Limit (%):</b>	No information available
<b>Autoignition Temperature (°C/°F):</b>	No information available

<b>Suitable Extinguishing Media:</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray mist or foam. Alcohol-resistant foam.
<b>Unsuitable Extinguishing Media:</b>	No information available.
<b>Hazardous Combustion Products:</b>	Carbon monoxide; Carbon dioxide
<b>Specific hazards:</b>	May be combustible at high temperatures.
<b>Special Protective Equipment for Firefighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
<b>Specific Methods:</b>	Dike fire-control water for later disposal; do not scatter the material. Cool containers / tanks with spray water. For fires involving tanks or car/trailer load, cool containers with flooding quantities of water until well after the fire is out.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

**Environmental Precautions:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods for Cleaning Up:**

Sweep up and shovel into suitable containers for disposal. Use a suitable vacuum cleaner. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapours/dust. Avoid dust formation. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

**Storage****Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Deep freeze. Store at -20 °C. Store away from incompatible materials.

**Incompatible Products:**

Oxidizing agents. Bases.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures to reduce exposure:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protective Equipment**

**Eye protection:** Safety glasses. Safety glasses with side-shields.

**Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.

**Respiratory protection:** Wear respirator with dust filter..

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

**National occupational exposure limits****United States**

U.S Occupational Exposure Limits: Not determined

**Canada**

Canada Occupational Exposure Limits: Not determined

**Australia and Mexico**

Occupational Exposure Limits for Australia and Mexico: Not determined

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state:</b> Solid	<b>Appearance:</b> Powder. Crystalline powder.	<b>Color:</b> White. Off-white.
<b>Odor:</b> None.	<b>Taste</b> No information available	<b>Molecular weight:</b> 443.49
<b>Flash point (°C) :</b> Not determined	<b>Lower Explosion Limit (%):</b> No information available	<b>Upper Explosion Limit (%):</b> No information available
<b>Autoignition Temperature (°C/°F):</b> No information available	<b>pH:</b> No information available	<b>Boiling point/range(°C/°F):</b> No information available
<b>Melting point/range(°C/°F):</b> 113-115 °C/235.4-239 °F	<b>Decomposition temperature(°C/°F):</b> No information available	<b>Specific gravity:</b> No information available
<b>Density (g/cm3):</b> No information available	<b>Bulk density:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Vapor density:</b> No information available	<b>Evaporation rate:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Miscibility:</b> No information available
<b>Solubility:</b> Soluble in Water		

**10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable at normal conditions
<b>Conditions to avoid:</b>	Heat. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
<b>Materials to avoid:</b>	Strong oxidising agents. Bases.
<b>Hazardous decomposition products:</b>	Carbon monoxide. Carbon dioxide.
<b>Possibility of Hazardous Reactions:</b>	No information available
<b>Polymerization:</b>	Hazardous polymerisation does not occur
<b>Corrosivity:</b>	No information available
<b>Special Remarks on Corrosivity:</b>	No information available

**11. TOXICOLOGICAL INFORMATION**

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

*Levorphanol Tartrate* - 5985-38-6

- LD50/oral/rat** = No information available
- LD50/oral/mouse** = No information available
- LD50/dermal/rabbit** = Not determined
- LD50/dermal/rat** = No information available
- LC50/inhalation/rat** =  
No information available
- LC50/inhalation/mouse** = No information available

#### Product Information

- LC50/inhalation/rat** =  
No information available
- LC50/Inhalation/mouse** = No information available
- LD50/dermal/rabbit** = No information available
- LD50/dermal/rat** = No information available
- LD50/oral/rat** = No information available
- LD50/oral/mouse** = No information available

#### Local Effects

- Skin irritation:** May cause skin irritation.
- Eye irritation:** Contact with eyes may cause irritation.
- Inhalation:** May cause irritation of respiratory tract.
- Ingestion:** Harmful if swallowed. May be habit forming. Ingestion may cause nausea, vomiting. May cause abdominal pain. May cause constipation. May cause dry mouth. May cause decreased appetite or anorexia. May affect behavior/central nervous system (lightheadness, dizziness, headache, drowsiness, unusual tiredness or weakness, nervousness, confusion, euphoria, tremor, excitement, rigidity, seizures, analgesia). May affect the cardiovascular system (slow, irregular heartbeat, hypotension). May affect respiration (slow or troubled breathing). May affect urinary system (kidneys). May cause painful or difficult urination. May cause increase in urine volume. May affect blood (changes in serum composition). May cause vision disturbances. May affect eyes (pinpoint pupils).
- Sensitization:** No information available

#### Chronic Toxicity

- Chronic Toxicity** Prolonged or repeated ingestion may affect the kidneys, adrenal gland, bones, central nervous system, and cardiovascular system.
- Carcinogenic effects:** No information available
- Mutagenic Effects:** May affect genetic material .
- Reproductive Effects:** Experiments have shown reproductive toxicity effects on laboratory animals.

**Teratogenic Effects:** May cause birth defects (teratogenic effects) based on animal test data. Showed teratogenic effects in animal experiments. There are no adequate and well-controlled studies in humans.. No data in humans was available to evaluate the effects of exposure on development.

**Target Organs:** Central nervous system.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY

**Toxicity to terrestrial and aquatic plants and animals:** No information available

**Ecotoxicity effects:**

**Aquatic toxicity:**

**Mobility:** No information available

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

### Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Levorphanol Tartrate	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** 2811  
**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** Not applicable  
**Marine Pollutant:** No data available  
**ERG No:** 153  
**DOT RQ (lbs):** No information available

### TDG (Canada)

**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**UN-No:** 2811  
**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Description:** No information available

### ADR

**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**UN-No:** 2811

**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**UN-No:** 2811  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**MFAG:** No information available  
**Maximum Quantity:** No information available

**RID**

**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**UN-No:** 2811  
**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available

**ICAO**

**UN-No:** 2811  
**Hazard Class:** 6.1  
**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Description:** No information available

**IATA**

**Proper Shipping Name:** Toxic solids, organic, n.o.s.(Levorphanol Tartrate)  
**UN-No:** 2811  
**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Description:** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

Components	U.S. TSCA	Philippines (PICCS)	KOREA KECL	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Levorphanol Tartrate</i>	Not Listed	Not present	Not present	Not present	Not present	Not present	Not present

**U.S. Regulations**

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.



**Chemicals Known to the State of California to Cause Cancer:**

WARNING: This product contains a chemical known to the State of California to cause cancer. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Levorphanol Tartrate	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Levorphanol Tartrate	None	None	None	None	None

**U.S. TSCA**

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Levorphanol Tartrate	Not Applicable	Not Applicable

**Canada****WHMIS hazard class:**

D1B Toxic materials

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
Levorphanol Tartrate	Not Listed	Not Listed

**EU Classification****R -phrase(s)**

R25 - Toxic if swallowed.

R63 - Possible risk of harm to the unborn child.

**S -phrase(s)**

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 - Avoid exposure - obtain special instructions before use.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**The product is classified in accordance with Annex VI to Directive 67/548/EEC****Indication of danger:**

T - Toxic

Xn - Harmful.



## 16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1-2004 standards.

**Revision date:** 27-Apr-2010

**Reason for revision:** Not applicable

**Additional advice:** Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

**Prepared by:** Health & Safety

**Literature reference:** No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.