SECTION 1. IDENTIFICATION

Product Identifier: Chemilian™ L3000 XP
Other Means of Identification: Dihexyl 2-methylenemalonate, Dihexyl 2-methylene-propanedioate, DHMM, 35432-43-0, Propanedioic acid, 2-methylene-, 1,3-dihexyl ester, EXP2014-2026 Experimental Monomer
Recommended Use: For Research and Development Use Only per 40 CFR 720.36. Not for commercial sale.

Manufacturer / Supplier:
Sirrus, Inc., 422 Wards Corner Road, Suite B, Loveland, OH, 45140, 513-453-0308,
www.sirruschemistry.com
3E Company, Global Response Access Code: 333992, Contract #13640, Americas, 1-866-519-4752 (US, Canada, Mexico), 1-760-476-3962, 24 hours
SDS No.: 0202_1
Date of Revision: June 24, 2019

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification:
Acute toxicity (Oral) - Category 4; Skin corrosion/irritation - Category 2; Eye damage/eye irritation - Category 1; Skin sensitization - Category 1

GHS Label Elements:
Note:
Experimental sample. Not all hazards have been evaluated.

Signal Word:
Danger

Hazard Statement(s):
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.

Precautionary Statement(s):
Prevention:
P261 Avoid breathing dusts/mist.
P264 Wash hands and skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P363 Wash contaminated clothing before reuse.
P280 Wear impervious gloves/protective clothing/eye protection/face protection.
Response:
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you fell unwell.
P330 Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Disposal:
P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

Other Hazards
Hazard Not Otherwise Classified (HNOC): None.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Percent</th>
<th>CAS#</th>
</tr>
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<tbody>
<tr>
<td>Dihexyl 2-methylenemalonate</td>
<td>&gt;96%</td>
<td>35432-43-0</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-4-methylphenol</td>
<td>&lt;0.3%</td>
<td>128-37-0</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation
Remove source of exposure or move to fresh air. Get medical advice/attention if you feel unwell or are concerned.

Skin Contact
Avoid direct contact. Wear chemical protective clothing if necessary. Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs get medical advice/attention.

Eye Contact
Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

Ingestion
Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Get medical advice/attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed
See Sections 2 and 11 for information on symptoms of over exposure. If exposed or concerned: Get medical adviceImmediate Medical Attention and Special Treatment

Target Organs
Eyes, skin. Immediately flush affected areas with water per First-aid Measures.

Special Instructions
Avoid breathing dust, or mists.

Medical Conditions Aggravated by Exposure
None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Not combustible. Use extinguishing agent suitable for surrounding fire.

**Unsuitable Extinguishing Media**
None known.

**Specific Hazards Arising from the Chemical**
Forms carbon monoxide and carbon dioxide upon burning.
Not known to generate any hazardous decomposition products in a fire.

**Special Protective Equipment and Precautions for Fire-fighters**
Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures**
Use the personal protective equipment recommended in Section 8 of this safety data sheet.

**Environmental Precautions**
Do not allow into any sewer, on the ground or into any waterway.

**Methods and Materials for Containment and Cleaning Up**
Contain and soak up spill with absorbent that does not react with spilled product.

### SECTION 7. HANDLING AND STORAGE

**Precautions for Safe Handling**
Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing.
Do not handle until all safety precautions have been read and understood. Do not breathe dust or mists. Do not aerosolize this product.

**Conditions for Safe Storage**
Store in an area that is: cool, well-ventilated.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**
Not available.

**Appropriate Engineering Controls**
Use a local exhaust ventilation and enclosure, if necessary, to control amount in the air.

**Individual Protection Measures**

- **Eye/Face Protection**
  Wear chemical safety goggles.

- **Skin Protection**
  Wear chemical protective clothing e.g. impervious gloves, aprons, boots.

- **Respiratory Protection**
  Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge at all times when handling this material.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Basic Physical and Chemical Properties**

- **Appearance**
  Clear colourless liquid. Particle Size: Not applicable

- **Odour**
  Pungent

- **Odour Threshold**
  Not available

- **pH**
  Not applicable

- **Melting Point/Freezing Point**
  Not available (melting); Not available (freezing)

- **Initial Boiling Point/Range**
  Available

- **Flash Point**
  165 - 175 °C (329 - 347 °F) (closed cup)
Evaporation Rate: Not available

Flammability (solid, gas): Not available

Upper/Lower Flammability or Explosive Limit: Not available (upper); Not available (lower)

Vapour Pressure: Not available

Vapour Density (air = 1): Not available

Relative Density (water = 1): Not available

Solubility: Insoluble in water; Moderately soluble in common organic solvents.

Partition Coefficient, n-Octanol/Water (Log Kow): Not available

Auto-ignition Temperature: Not available

Decomposition Temperature: Not available

Viscosity: Not available (kinematic); 20 - 100 centipoises at 25 °C (77 °F) (dynamic)

Other Information

Physical State: Liquid

Molecular Formula: Not applicable

Molecular Weight: Not applicable

Bulk Density: Not available

Surface Tension: Not available

Critical Temperature: Not available

Electrical Conductivity: Not available

Saturated Vapour Pressure at 50 deg C: Not available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity
Polymerization will occur in the presence of alkaline materials. Excessive heat may be released upon polymerization. Gradual degradation may occur with water or moisture.

Chemical Stability
Stable if inhibited.

Possibility of Hazardous Reactions
Polymerizes in the presence of alkaline conditions (high pH). Releases heat.

Conditions to Avoid
Prolonged exposure to high temperatures. Water, moisture or humidity. Alkaline conditions (high pH).

Incompatible Materials
Polymerizes on contact with: bases (e.g. sodium hydroxide, triethylamine, etc.).

Hazardous Decomposition Products
Oxides of carbon.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Experimental Sample. The toxicological properties of this material have not been fully determined. The following data are mostly based on a related compound (diethyl 2-methylene malonate: CAS 3377-20-6), not actual data for this material unless otherwise noted. GHS categories are also based on data for diethyl 2-methylene malonate.

Likely Routes of Exposure
Skin contact.

Acute Toxicity
LC50: No information was located.
LD50 (oral): LD50 = 550 mg/kg (diethyl 2-methylene malonate)
LD50 (dermal): LD50 >5000 mg/kg (diethyl 2-methylene malonate)
Skin Corrosion/Irritation
Can cause skin irritation based on animal tests for a related material.

Serious Eye Damage/Irritation
Causes serious eye damage based on skin irritation information for a related material.

STOT (Specific Target Organ Toxicity) - Single Exposure
No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure
No information was located.

Respiratory and/or Skin Sensitization
Can cause an allergic reaction (skin sensitization) based on animal tests for a related material.

Carcinogenicity
This product is not listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) and has not been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.

Reproductive Toxicity
Development of Offspring
No information was located.

Sexual Function and Fertility
No information was located.

Germ Cell Mutagenicity (Actual data for dihexyl 2-methylenemalonate)
Negative in Ames test with and without metabolic activation (cell growth inhibition observed).

Interactive Effects
No information was located.

No information was located for: Aspiration Hazard, Development of Offspring, Sexual Function and Fertility, Effects on or via Lactation, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

Persistence and Degradability
This substance does not readily biodegrade.

Bioaccumulative Potential
No information was located.

Mobility in Soil
No information was located.

Other Adverse Effects
There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods
Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.
SECTION 14. TRANSPORT INFORMATION

Not regulated for transport

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations
None known.

USA

Toxic Substances Control Act (TSCA) Section 8(b)
Material is provided for Research and Development Purposes only per 40 CFR 720.36.

SECTION 16. OTHER INFORMATION

SDS Prepared By  Alex Holzer
Phone No. 513-453-0106
Date of Preparation  August 14, 2014
Revision Indicators  Revised: 6/24/19 by ARH

Key to Abbreviations
ACGIH® = American Conference of Governmental Industrial Hygienists
AIHA = American Industrial Hygiene Association
HSDB® = Hazardous Substances Data Bank
IARC = International Agency for Research on Cancer
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
NTP = National Toxicology Program
OSHA = US Occupational Safety and Health Administration
RTECS® = Registry of Toxic Effects of Chemical Substances

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