

Chemilian™ H4000 XP

SECTION 1. IDENTIFICATION

Product Identifier	Chemilian™ H4000 XP
Other Means of Identification	Dicyclohexyl 2-methylenemalonate, Dicyclohexyl 2-methylidenepropanedioate, DCHMM, 1884158-96-6, Propanedioic acid, 2-methylene-, 1,3-dicyclohexyl ester, EXP2015-2028 Experimental Monomer
Recommended Use Restrictions on 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
Emergency Phone No.	3E Company, Global Response Access Code: 333992, Contract #13640, Americas, 1-866-519-4752 (US, Canada, Mexico), 1-760-476-3962, 24 hours
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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.

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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 feel
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

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

Name:	Percent:	CAS#:
Dicyclohexyl 2-methylenemalonate	>96%	1884158-96-6
2,6-Di-tert-butyl-4-methylphenol	<0.3%	128-37-0

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 advice
Immediate Medical Attention and Special Treatment

Target Organs

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

Special Instructions

Not applicable.

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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.

In a fire, the following hazardous materials may be generated: toxic, corrosive chemicals.

Special Protective Equipment and Precautions for Fire-fighters

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours.

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

Avoid breathing dust or mist. Use the personal protective equipment recommended in Section 8 of 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

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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) Not available
Initial Boiling Point/Range	Not available
Flash Point	165 - 170 °C (329 - 338 °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
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	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 a large amount of heat.

Conditions to Avoid

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

Incompatible Materials

Polymerizes on contact with: strong bases (e.g. sodium hydroxide).

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-methylenemalonate: CAS 3377-20-6), not actual data for this material, unless otherwise noted. GHS categories are also based on data for diethyl 2-methylenemalonate.

Likely Routes of Exposure

Skin contact.

Acute Toxicity

LC50: No information was located.

Acute Oral Toxicity: LD50 = 550 mg/kg (diethyl 2-methylenemalonate)

Acute Dermal Toxicity: LD50 >5000 mg/kg (diethyl 2-methylenemalonate)

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 dicyclohexyl 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

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

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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 Alexander R. Holzer
Phone No. 513-453-0106
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Revision Indicators Revised 1/7/19 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 Prevention 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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