

Chemilian™ H4000 XP

SECTION 1 IDENTIFICATION

Product Identifier	Chemilian™ H4000 XP
Other Means of Identification	Dicyclohexyl 2-methylenemalonate, Dicyclohexyl 2-methylidene-propanedioate, 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
SDS No.	400_3
Date of Revision	June 16, 2020

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification:

Skin sensitization - Category 1A

GHS Label Elements:

Note:

Experimental sample. Not all hazards have been evaluated.

Signal Word:

Warning

Hazard Statement(s):

H317 May cause an allergic skin reaction.

Precautionary Statement(s): Prevention:

P261 Avoid breathing dusts/mist.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

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

Other Hazards

Hazard Not Otherwise Classified (HNOC): Not applicable.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**Notes**

Chemical Name	Percent	CAS#
Dicyclohexyl 2-methylenemalonate	98-99%	1884158-96-6

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 repeated 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

Ingestion: Harmful if swallowed. May cause stomach distress, nausea, or vomiting.

Skin Contact: Causes skin irritation. Repeated contact may result in an allergic skin reaction.

Eye Contact: Not irritating

Indication of any Immediate Medical Attention and Special Treatment Needed: In case of an accident or if you feel unwell, seek medical advice immediately.

Medical Conditions Aggravated by Exposure: No information available.

SECTION 5 FIRE-FIGHTING MEASURES**Extinguishing Media**

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

Unsuitable Extinguishing Media: No information available.

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

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Before entry, especially into confined areas, use an appropriate monitor to check for toxic gases or vapors. 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: dry, cool, well-ventilated.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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:	In case of insufficient ventilation, wear suitable respiratory equipment. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear colorless liquid.
Odor	Sweet
Odor Threshold	No information available
pH	No information available
Melting Point/Freezing Point	-64.2 °C (-83.56 °F)
Initial Boiling Point/Range	None (decomposition starts at 200 °C (392°F))
Flash Point	172 °C
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Upper/Lower Flammability or Explosive Limit	No information available

Vapor Pressure	0.023Pa at 20 °C (68 °F); 0.041Pa at 25 °C (77 °F)
Vapor Density (air = 1)	No information available
Relative Density (water = 1)	1.07 g/cm ³ at 20 °C (68 °F)
Solubility	Insoluble in water; Moderately soluble in common organic solvents.
Partition Coefficient, n-Octanol/Water (Log Kow)	
Auto-ignition Temperature	370 °C (698 °F) at 1019-1025hPa
Decomposition Temperature	No information available
Viscosity	No information available
Other Information	
Physical State	Liquid
Bulk Density	No information available
Surface Tension	No information available
Critical Temperature	No information available
Electrical Conductivity	No information available
Vapour Pressure at 50 deg C	No information available
Saturated Vapour Concentration	No information 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.

Likely Routes of Exposure

Skin contact.

Acute Toxicity

Acute Inhalation Toxicity: No information available.

Acute Oral Toxicity: No information available.

Acute Dermal Toxicity: No information available.

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Skin Corrosion/Irritation

No information available.

Serious Eye Damage/Irritation

Not irritating, Bovine Cornea Opacity and Permeability (BCOP – OECD 437).

STOT (Specific Target Organ Toxicity) - Single Exposure

No information available.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information available.

Respiratory and/or Skin Sensitization

Can cause an allergic reaction (skin sensitization) based on information from a Local Lymph Node Assay (OECD 229)

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. Structural features indicate low potential for carcinogenic activity.

Reproductive Toxicity

No information available.

Development of Offspring

No information available.

Sexual Function and Fertility

No information available.

Germ Cell Mutagenicity

The germ cell mutagenicity of this product has not been determined. Inconsistent findings from *in vitro* assays have been generated on this product or structurally-similar analogs.

Interactive Effects

No information available.

Aspiration Hazards

No information available.

SECTION 12 ECOLOGICAL INFORMATION**Persistence and Degradability**

No information available.

Bioaccumulative Potential

No information available.

Mobility in Soil

No information available.

Other Adverse Effects

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.

Do not rinse containers with water.

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SECTION 14 TRANSPORT INFORMATION

Not regulated for transport.

SECTION 15 REGULATORY INFORMATION

Safety, Health and Environmental Regulations

No information available.

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

SDS Prepared	Alexander R. Holzer
By Phone No.	513-453-0107
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Key to Abbreviations	IARC = International Agency for Research on Cancer NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration
Disclaimer	This information is furnished without warranty, representation, or license of any kind, except that this information is accurate to the best of the Supplier's knowledge or is obtained from sources believed by the Supplier to be accurate. No warranty is expressed or implied regarding the accuracy of this information or the results to be obtained from its use thereof. The Supplier assumes no responsibility for injuries proximately caused by the use of the Material if reasonable safety procedures are not followed as stipulated in this Safety Data Sheet. Additionally, the Supplier assumes no responsibility for injuries proximately caused by abnormal use of the Material even if reasonable safety procedures are followed. Buyer assumes the risk in its use of the Material.