



MATERIAL SAFETY DATA SHEET

SOPRASOLAR PV WIRE MANAGEMENT SYSTEM (WMS)

HMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #0000ff; color: white;"><td style="text-align: center;">1</td><td style="text-align: center;">HEALTH</td></tr> <tr style="background-color: #ff0000; color: white;"><td style="text-align: center;">0</td><td style="text-align: center;">FLAMMABILITY</td></tr> <tr style="background-color: #ffa500; color: white;"><td style="text-align: center;">0</td><td style="text-align: center;">REACTIVITY</td></tr> <tr style="background-color: #ffffff; color: black;"><td style="text-align: center;">B</td><td style="text-align: center;">PROTECTIVE EQUIPMENT</td></tr> </table>	1	HEALTH	0	FLAMMABILITY	0	REACTIVITY	B	PROTECTIVE EQUIPMENT		NOT REGULATED
1	HEALTH									
0	FLAMMABILITY									
0	REACTIVITY									
B	PROTECTIVE EQUIPMENT									

SECTION II. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name:	Soprasolar PV Wire Management System
Use:	Wire management system
Manufacturer:	Soprema Inc. 310 Quadral Drive Wadsworth, Ohio 44281 UNITED STATES
Distributor:	Soprema, Inc. 310 Quadral Drive Wadsworth, Ohio 44281 UNITED STATES
In case of emergency:	SOPREMA (8:00am to 5:00pm - Eastern time): (800) 356-3521 CHEMTREC (USA) (24h.): (800) 424-9300 CANUTEC (Canada): (613) 996-6666 International: (703) 527-3887

EMERGENCY OVERVIEW!!!

This mixture has not been evaluated as a whole. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating or processing. The end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

Component	CAS#	% by weight
Calcium carbonate	1317-65-3	1-5
Calcium stearate	1592-23-0	1-5
Titanium dioxide	13463-67-7	5-10

SECTION III. POTENTIAL HEALTH EFFECTS	
ROUTES OF EXPOSURE	Inhalation, ingestion, skin contact
ACUTE EXPOSURE	Inhalation: Resin particles, like other inert materials, can be mechanically irritating. Ingestion: May be harmful if swallowed. Eyes: Resin particles, like other inert materials, are mechanically irritating to eyes. Skin: Experience shows no unusual dermatitis hazard from routine handling.
CHRONIC EXPOSURE	Refer to Section XI for Toxicological Information
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	None known.

SECTION IV. FIRST AID MEASURES	
EYES	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.
SKIN	Wash off with soap and plenty of water. If skin irritation persists seek medical attention.
INHALATION	Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.
INGESTION	Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.

SECTION V. FIRE-FIGHTING MEASURES	
Flash point	Not applicable
Upper flammability limit (UFL)	Not applicable
Lower flammability limit (LFL)	Not applicable
Special fire fight procedure	Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.
Extinguishing media	Carbon dioxide blanket, water spray, dry powder, foam
Unusual fire and explosion hazards	May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO ₂), carbon monoxide (CO), oxides of nitrogen (NO _x), other hazardous materials, and smoke are all possible.

SECTION VI. ACCIDENTAL RELEASE MEASURES	
<p>Personal precautions: Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.</p> <p>Environmental precautions: Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.</p> <p>Methods for cleaning up: Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 13 of this MSDS for proper disposal methods.</p>	

SECTION VII. HANDLING AND STORAGE	
<p>Handling Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. Processing fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials.</p> <p>Storage Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.</p>	

SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION	
RESPIRATORY	No personal respiratory protective equipment normally required. If dusty conditions occur wear appropriate respiratory protection.
HANDS/SKIN/BODY	Protective gloves; long sleeved clothing, safety shoes
RESPIRATORY	If vapor concentration becomes high, use NIOSH/MSHA approved respiratory protection.
EYES/FACE	Safety glasses with side-shields

SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

GENERAL HYGIENE CONSIDERATIONS	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). It is unlikely, under normal working conditions with adequate ventilation, that the exposure limits will be exceeded for residual VCM. However, the user should take the necessary precautions (e.g. mechanical ventilation, local exhaust ventilation, air-monitoring, respiratory protection, etc.) to ensure airborne levels of any vapors including VCM or dusts that may be released during heating or processing are below regulated levels.			
ENGINEERING MEASURES	Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.			
EXPOSURE LIMITS				
Components	Value	Exposure time	Exposure type	List
Calcium Carbonate	5 mg/m3	PEL	Respirable fraction	OSHA Z1
	15 mg/m3	PEL	Total dust	OSHA Z1
	10 mg/m3	TWA		MX OEL
	20 mg/m3	STEL		MX OEL
Calcium stearate	10 mg/m3	TWA		ACGIH
Titanium dioxide	10 mg/m3	TWA		ACGIH
	15 mg/m3	PEL	Total dust	OSHA Z1
	10 mg/m3	TWA	Total dust	OSHA Z1A
	10 mg/m3	TWA	as Ti	MX OEL
	20 mg/m3	STEL	as Ti	MX OEL

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

FORM:	Solid	EVAPORATION RATE:	Not applicable
APPEARANCE:	Pellets, powder	SPECIFIC GRAVITY:	Not determined
COLOR:	White	BULK DENSITY:	Not established
ODOR:	Very faint	VAPOR PRESSURE:	Not applicable
MELTING POINT/RANGE:	Not determined	VAPOR DENSITY:	Not applicable
BOILING POINT:	Not applicable	PH:	Not applicable
WATER SOLUBILITY:	Insoluble		

SECTION X. STABILITY AND REACTIVITY

Chemical Stability

Stable.

Conditions to Avoid

Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

Incompatibility

Incompatible with strong acids and oxidizing agents., Avoid contact with acetal homopolymers and acetal copolymers during processing.

Hazardous Decomposition Products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), other hazardous materials, and smoke are all possible. Prolonged heating (approximately 30 minutes or more) above 392 °F (200 °C) or short term heating at 482 °F (250 °C) may result in product decomposition and evolution of carbon monoxide and hydrogen chloride.

Hazardous Polymerization

Will not occur.

SECTION XI. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

CAS No.	Chemical name	Effect	Target Organ
1317-65-3	Calcium carbonate	Irritant	Eyes, skin
		Systemic effects	Eyes, skin, respiratory system
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

CAS No.	Chemical name	Route	Value	Species
1592-23-0	Calcium stearate	Oral LD50	> 10 gm/kg	rat

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

CAS No.	Chemical name	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	no	2B	no

IARC Carcinogen Classifications:

- 1 - The component is carcinogenic to humans.
- 2A - The component is probably carcinogenic to humans.
- 2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

- 1 - The component is known to be a human carcinogen.
- 2 - The component is reasonably anticipated to be a human carcinogen.

SECTION XII. ECOLOGICAL INFORMATION

Persistence and degradability: Not readily biodegradable.

Environmental Toxicity: Adverse ecological impact is not known or expected under normal use.

Bioaccumulation Potential: No data available

Additional advice: Not applicable

SECTION XIII. DISPOSAL CONSIDERATIONS

Product: Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

Contaminated packaging: Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

SECTION XIV. TRANSPORTATION INFORMATION

U.S. DOT Classification: Not regulated for transportation.

ICAO/IATA (air): Not regulated for transportation.

IMO / IMDG (maritime): Not regulated for transportation.

SECTION XV. REGULATORY INFORMATION

US Regulations:

OSHA Status : Classified as hazardous based on components.

TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302): Not applicable

California Proposition 65: Not applicable

SARA Title III Section 302 Extremely Hazardous Substance

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SECTION XV. REGULATORY INFORMATION

Canadian Regulations:

National Pollutant Release Inventory (NPRI): Not applicable

WHMIS Classification: D2A

DSL : All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS: Not determined

China IECS: Not determined

Europe EINECS: Listed

Japan ENCS: Not determined

Korea KECI: Not determined

Philippines PICCS: Not determined

SECTION XVI. OTHER INFORMATION

Glossary:

ACGIH: American Conference of Governmental Industrial Hygienists

ANSI: American National Standards Institute

ASTM: American Society for Testing and Materials

CAS: Chemical Abstract Services

CFR: Code of Federal Regulations (United States)

CSA: Canadian Standardisation Association

DOT: Department of Transportation (United States)

DSL: Domestic Substances List (Canada)

EPA: Environmental Protection Agency (United States)

HMIS: Hazardous Material Information System

IARC: International Agency for Research on Cancer

LC50: (Lethal concentration₅₀) Concentration of a substance in air that causes death of 50% mortality of a defined animal population

LD50: (Lethal dose₅₀) Single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.

NFPA: National Fire Protection Association (United States)

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety & Health Administration (United States)

PEL: Permissible Exposure Limit

RCRA: Resource Conservation and Recovery Act (United States)

RTECS: Registry of Toxic Effects of Chemical Substances

STEL: Short Term Exposure Limit

TDG: Transportation of Dangerous Goods

TLV: Threshold Limit Value

TWA: Time-weighted average

TSCA: Toxic Substances Control Act (United States)

WHMIS: Workplace Hazardous Materials Information System (Canada)

Reference:

Supplier MSDS

This MSDS has been prepared by: SOPREMA, INC.

For information: 800-543-3085

The Material Safety Data Sheets of SOPREMA are available on Internet at the following site: [HTTP://WWW.SOPREMA.US](http://www.soprema.us)

Justification of the update:

New MSDS.

SECTION XVI. OTHER INFORMATION

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.