

Duro-Last® EV Membrane

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
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Product Name: Duro-Last® EV Membrane
Version: 1
Identifier 1: Plasticized PVC Membrane
Identifier 2: Sheeting Compound
Product Type: Roll Good
Product Use: Roofing Material

Company Information: Duro-Last®, Inc.
 525 W Morley Dr.
 Saginaw, MI 48601
 Phone: (800) 248-0280
 Internet Address: www.duro-last.com

24 Hour Emergency Contact: INFOTRAC
 1-800-535-5053 (US & Canada)
 1-352-323-3500 (International)

SECTION 2	HAZARD(S) IDENTIFICATION
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Emergency Overview: The product contains no substances which, at their given concentration, are considered to be hazardous to health.

Hazard Classification: As defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200, this product is considered an article and does not require an SDS. In addition, articles are not included in the scope of the Globally Harmonization System (GHS). As such, the GHS labeling elements are not included on this SDS. All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk. Although these products are not subject to the OSHA Standard or GHS labeling elements, Duro-Last® would like to disclose as much health and safety information as possible to ensure that this product is handled and used properly. This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and be made available for employees and other users of this product. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Other Hazards: Very toxic to aquatic life with long lasting effects.
 Category 1



SECTION 3

COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients

Chemical Name	CAS Number	Concentration (%)
PVC Resin	9002-86-2	45.00 – 55.00
Titanium Dioxide	13463-67-7	1.00 – 6.00
Antimony Trioxide	1309-64-4	1.00 – 3.00
Dialkyl Phthalate	68515-43-5	1.00 – 3.00
Calcium Carbonate	1317-65-3	0.00 – 5.50
Amorphous Silica	112926-00-8	0.00 – 0.50

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4

FIRST-AID MEASURES

Eye Contact:	Not an expected route of exposure. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Inhalation:	Not an expected route of exposure. Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician/poison center if individual's condition declines or if symptoms persist.
Skin Contact:	Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.
Ingestion:	Not an expected route of exposure. Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Call a poison center or doctor/physician if you feel unwell.
Most Important Symptoms and Effects, Both Acute and Delayed:	Not determined.
Protection of First-Aiders:	No action shall be taken involving any personal risk or without suitable training. Use personal protective equipment as required (see Section 8). Show this Safety Data Sheet to the doctor in attendance.
Notes to Physician:	Treat symptomatically.

SECTION 5

FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Dry chemical, Carbon Dioxide, water spray, or alcohol-resistant foam.
Hazardous Combustion Products:	Hydrogen Chloride and Carbon Oxides. Hazardous emissions may occur during processing at elevated temperatures.
Specific Precautionary Methods:	Product is not flammable or combustible.
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6

ACCIDENTAL RELEASE MEASURES

- Handling Precautions:** Use personal protection recommended in Section 8. Remove all sources of ignition.
- Environmental Precautions:** See Section 12 for additional Ecological Information.
- Methods for Containment:** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up:** Keep in suitable containers for disposal.

SECTION 7

HANDLING AND STORAGE

- Handling Precautions:** Handle in accordance with good industrial hygiene and safety practice. Do not handle until all safety precautions have been read and understood. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Keep away from heat/sparks/open flames/hot surfaces.
- Storage Conditions:** Store in properly labeled containers in a cool, ventilated area.
- Incompatible Materials:** None known based on information supplied.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
PVC Resin	TWA: 1 mg/m ³ respirable particulate matter	-	-
Calcium Carbonate	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Antimony Trioxide	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb
Titanium Dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
Amorphous Silica	-	(vacated) TWA: 6 mg/m ³ TWA: 20 mppcf (80)/(%) SiO ₂ mg/m ³ TWA	-

- Engineering Measures:** Apply technical measures to comply with the occupational exposure limits.
- Hygiene Measures:** Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on Section 4 of this SDS. Launder contaminated clothing before reuse.
- Personal Protective Equipment:**
- Respiratory Protection**
Refer to 29 CFR 1910.134 for respiratory protection requirements.
- Eye/Face Protection**
None under normal use conditions.
- Skin and Body Protection**
Wear protective gloves and protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

SECTION 9		PHYSICAL AND CHEMICAL PROPERTIES	
Physical State:	Solid	Decomposition Temperature:	>400°F
Color:	White	pH:	N/A
Odor:	Characteristic	Flammability:	N/A
Appearance:	Plasticized PVC Sheeting	Vapor Pressure:	N/A
Flash Point:	N/A	Volatile:	< 2.0
Melting Point:	N/A	Relative Density:	N/A
Freezing Point:	N/A	Density:	1.20 – 1.80
Boiling Point:	N/A	Solubility:	Insoluble

SECTION 10		STABILITY AND REACTIVITY	
Reactivity:	Not reactive under normal conditions.		
Chemical Stability:	Stable under recommended storage conditions.		
Possibility of Hazardous Reactions:	None under normal processing.		
Hazardous Polymerization:	Hazardous polymerization does not occur.		
Conditions to Avoid:	Keep away from heat/sparks/open flames/hot surfaces. No smoking.		
Incompatible Materials:	None known based on information supplied.		
Hazardous Decomposition Products:	Carbon Monoxide. Carbon Dioxide. Hydrogen Chloride.		

SECTION 11		TOXICOLOGICAL INFORMATION	
Likely Routes of Exposure:	Eye Contact	Not an expected route of exposure.	
	Skin Contact	Prolonged contact may cause redness and irritation.	
	Inhalation	Not an expected route of exposure.	
	Ingestion	May cause discomfort if swallowed.	

Toxicity

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Dialkyl Phthalate	> 19700 mg/kg (Rat)	-	-
Antimony Trioxide	> 34600 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5200 mg/m ³ (Rat) 4 h
Titanium Dioxide	> 10000 mg/kg (Rat)	-	-

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

Carcinogenicity

Carbon black is a possible carcinogen when it appears as a respirable dust. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
PVC Resin	-	Group 3	-	-
Antimony Trioxide	A2	Group 2B	-	X
Titanium Dioxide	-	Group 2B	-	X
Amorphous Silica	-	Group 3	-	-

Legend*ACGIH (American Conference of Governmental Industrial Hygienists)*

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical Measures of Toxicity:

The following values are calculated based on chapter 3.1 of the GHS document: not applicable due to form of the product.

SECTION 12**ECOLOGICAL INFORMATION****Environmental Data**

Chemical Name	Algae/Aquatic Plants	Fish	Crustacea
Dialkyl Phthalate	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC ₅₀	-	1: 48 h <i>Daphnia magna</i> mg/L EC ₅₀
Antimony Trioxide	0.63 - 0.8: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC ₅₀ 0.65 - 0.81: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC ₅₀	1000: 96 h <i>Brachydanio rerio</i> mg/L LC ₅₀ static 80: 96 h <i>Pimephales promelas</i> mg/L LC ₅₀ static	361.5 - 496.0: 48 h <i>Daphnia magna</i> mg/L EC ₅₀ Static 1000: 48 h <i>Daphnia magna</i> mg/L EC ₅₀

Persistence/Degradability: Not determined.**Bioaccumulation:** There is no data for this product.**Mobility:** Not determined.**Other Adverse Effects:** Not determined.**SECTION 13****DISPOSAL CONSIDERATIONS****Disposal Methods:** Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any federal, state, and local requirements.**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Antimony Trioxide	Toxic

SECTION 14**TRANSPORT INFORMATION****Other Information:** Non-regulated, not classified as dangerous.**SECTION 15****REGULATORY INFORMATION****TSCA Inventory:** PVC Resin, Dialkyl Phthalate, Calcium Carbonate, Titanium Dioxide, and Antimony Trioxide are listed as active in the United States Toxic Substances Control Act Section 8(b) Inventory.

CERCLA RQ:	This material contains Antimony Trioxide with a CERCLA RQ of 1,000lbs.
SARA 313:	Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. This material contains Antimony Trioxide with a 1.0% threshold value.
Clean Water Act:	This product contains the following substance which is regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42). This material contains Antimony Trioxide with a RQ of 1,000lbs which is listed as having toxic pollutants and hazardous substances. This material contains Dialkyl Phthalate which is listed as having toxic pollutants.
California Prop 65:	WARNING: This product can expose you to chemicals including Titanium Dioxide and Antimony Trioxide which are known to the State of California to cause cancer . For more information go to www.P65Warnings.ca.gov .

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
PVC Resin	X	-	-
Dialkyl Phthalate	-	-	X
Calcium Carbonate	X	X	X
Antimony Trioxide	X	X	X
Titanium Dioxide	X	X	X
Amorphous Silica	X	X	X

SECTION 16

OTHER INFORMATION

NFPA:	Health Hazards Not determined	Flammability Not determined	Instability Not determined	Special Hazards Not determined
HMIS:	Health Hazards Not determined	Flammability Not determined	Physical Hazards Not determined	Personal Protection Not determined

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Further Information: This SDS was prepared by InfoTrac.

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However Duro-Last®, Inc. does not assume 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 handled with care. Although Duro-Last®, Inc. has described herein all of the hazards to which we are currently aware; we cannot guarantee that these are the only hazards which exist.