Safety Data Sheet (SDS)

Review Date: May 12, 2016

1. Identification

Product Identifier:	**MoistureShield® Decking and Accessories** **ModernView™ Decking and Accessories** **LifeCycle® Decking and Accessories** Wood-Polymer Composite Lumber Products
Recommended Use:	**As a non-structural construction material primarily for exterior surface applications, including decks, docks, walkways, and various exterior flooring uses.**
Manufacturer:	**Advanced Environmental Recycling Technologies, Inc.**
Location:	**914 North Jefferson** **Springdale, Arkansas 72764**
Phone:	**866-729-2378**
Fax:	**479-756-7410**
Emergency:	**866-729-2378**

2. Hazard Identification

Classification of the Substance or Mixture:

Signal Word: Warning

This manufactured product is classified as an "Article as defined under OSHA 1910.1200(c) and is therefore exempt from the SDS requirement.

Processing dust and decomposition emissions and products are addressed by this document. Wood, colorant, stabilizers, and processing aids are encapsulated in a polymer matrix yielding the product ill-suited for dust formation. Hazardous emissions such as carbon dioxide, carbon monoxide, water vapor, methane, and other hydrocarbons, and hydrocarbon oxidation products may be produced by burning the product under ambient conditions. Open burning is prohibited in most jurisdictions. The product does not release significant amounts of hazardous chemicals under normal conditions.

GHS07

Signal Word: Irritant

Dust can be generated and become airborne during mechanical processing by means of sawing, sanding, milling, or similar actions. Processing that produces dust should be conducted in well ventilated areas. Exposure to certain wood dusts can produce irritation in the eyes, nose, and respiratory tract. Repeated exposures can produce or worsen allergic skin and respiratory reactions including asthma and rhinitis.

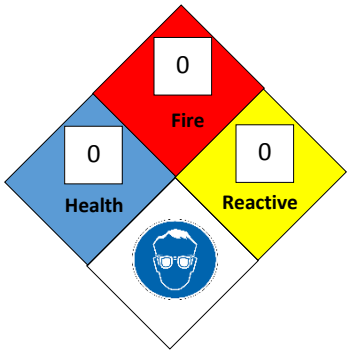
Hazardous decomposition products may be emitted under conditions of sub-stoichiometric or ambient air combustion. Decomposition products may become an irritant to nasal passages, lungs and throat.

Precautionary Statement: Use gloves, sleeves, eye protection, and dust mask as appropriate to prevent skin, eye, and respiratory irritation from mechanical and dust hazards when working the article.

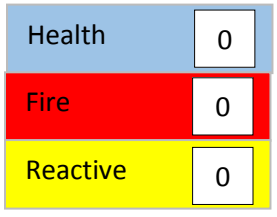
Dispose of scrap or unused material in accordance with local, state, and national regulations.

Classification System: NFPA/HMIS Definitions: 0-Least, 2-Moderate, 3-High, 4-Extreme

NFPA Ratings (Scale 0-4)



HMIS Ratings (Scale 0-4)



3. Composition/Information on Ingredients

Chemical Name	Common Name	CAS#	Concentration
Wood Dust	Wood Dust	NA	45-55%
Polyethylene	Polyethylene	9002-88-4	43-47%
Pigment	Colorant	NA	1.5-3%
Zinc Borate	Zinc Borate	138265-88-0	<1%
Carbon Black	Carbon Black	1333-86-4	<1%

Product is a matrix of polyethylene with other ingredients contained or encapsulated within the matrix. Primary ingredients are recycled wood and recycled polyethylene with additives for process, color, an environmental stability.

4. First Aid Measures

Eyes: Flush thoroughly with water. If irritation occurs call a physician.

Skin: Wash contact area with soap and water.

Inhalation: If respiratory irritation, cough, or wheezing occurs after exposure to dust, or combustion decomposition products, discontinue exposure, and seek medical assistance.

Ingestion: No adverse effects anticipated by this route of exposure. If ingestion causes discomfort, seek medical assistance.

5. Fire Fighting Measures

Extinguishing Media: Water, water fog, foam, carbon dioxide or dry chemical on residual fires.

Special Procedures: Fire fighters should use water to cool exposed material.

Protective Equipment: Self-contained breathing apparatus should be worn for fires that are enclosed. The exact nature of decomposition products will depend upon exposure conditions including temperature, availability of oxygen and presence of other materials. Decomposition products can include carbon dioxide, carbon monoxide, water vapor, methane and other hydrocarbons, and hydrocarbon oxidation products. Fire fighters should wear self-contained breathing apparatus if there is a risk of exposure to

gaseous products of combustion. Use water spray, water fog, foam, carbon dioxide or dry chemical powder on residual fires.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Individuals processing material using saws, mills, sanders, or other carpentry or milling equipment should wear eye protection and dust masks.

Notification Procedures: None

Environmental Precautions: Dust from sawing or milling or residual material from combustion may present release problems that should be addressed. Dust should be swept or vacuumed and disposed as regular solid waste. Water from fire-fighting operations and stormwater exposed to dust or combusted residual material should be processed through normal stormwater controls before release.

Methods and Materials for Containment and Cleanup: Solid product spilled should be collected and restacked or removed using normal material handling procedures. Personnel cleaning and recovering dust produced from sawing or milling should wear eye protection, dust masks, and gloves. Dust can be swept or vacuumed and stored in a regular non-porous solid waste container of appropriate size. Recovered material can be disposed as regular solid waste.

7. Handling and Storage

Precautions for Safe Handling: MoistureShield® Decking and Accessories, including brand family members LfieCycle® Decking and Accessories, and ModernView™ Decking and Accessories, is not intended for use in load bearing or heavy structural applications. MoistureShield® Decking and Accessories is heavier than similar wood products and care should be taken to accommodate the extra weight.

Precaution should be taken to properly handle the material to prevent injury.

Do not burn in fireplace or hating systems not specifically designed to combust wood and polyethylene mixtures. Do not store near strong oxidizing agents or combustible material.

Wash hands after handling and use.

Conditions for Safe Storage: Product will burn if exposed to fire or excessive heat. Avoid storing in areas where product will be exposed to flames, sparks, or excessive heat.

Product is designed to fade in exposed ambient conditions that include direct or indirect sunlight. Keep product covered or in packaging until used to prevent premature or uneven fading.

8. Exposure Control and Personal Protection

Control Parameters

Substance Name	CAS No.	OSHA PEL mg/m3	OSHA STEL mg/m3
Wood Dust (Hardwood)	NA	5	10
Carbon Black	1333-86-4	3.5	N/E

Substance Name	CAS No.	OSHA PEL mg/m3 Respirable Dust	OSHA PEL mg/m3 Total Dust
Zinc Borate (Particulate not otherwise regulated)	138265-88-0	5	10

STEL – Short Term Exposure Limit
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
TLV – Threshold Limit Value
TWA – Time Weighted Average (8 Hr. unless otherwise noted)

Appropriate Engineering Controls

- **Ventilation:** Cut and mill in well ventilated area. Maintain air concentrations below occupational exposure standards using engineering controls if necessary.
- **Respiratory Protection:** Approved dust respirators must be used if breathing dust is likely.
- **Eye Protection:** Safety glasses with side shields, or goggles should be worn during dusty conditions.

- **Skin Protection:** No special equipment is required. Gloves can be worn to protect hands from normal contact related abrasions. Good personal hygiene, including washing hands after contact, should be followed.

9. Physical Data

Appearance	Solid linear profiles colored mahogany, cedar, gray, earthtone, walnut, desert sand, and tigerwood
Odor	None
Odor Threshold	Not Established
pH:	Not Applicable
Melting Point	115 to 135°C / 239 to 275°F
Boiling Point	Not Applicable
Flash Point	> 572°F
Evaporation Rate	Not Applicable
Flammable	No
Combustible (solid)	Yes
Upper/Lower Flammability	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Relative Density	.97 g/cm
Solubility in Water	Negligible
Partition Coefficient	Not Established
Auto-ignition Temperature	343°C / 650°F (estimate)
Decomposition Temperature	290°C / 554°F (thermal degradation/ICAC 1400)
Viscosity at 100°C	NA

Product is a mixture of recycled polyethylene and recycled wood with pigment. Mixture normally contains from 43 to 47% polyethylene with 45 to 55% wood fiber.

10. Stability and Reactivity

Reactive:	Non-reactive
Chemical Stability:	Product is stable under normal conditions
Hazardous Reactions:	No hazardous reactions under normal conditions
Conditions to Avoid:	Avoid open flames and excessive heat
Incompatible Materials:	Avoid strong oxidizers
Hazardous Decomposition Products:	Combustion under ambient and sub-stoichiometric conditions will produce smoke, carbon monoxide, acetaldehyde, formaldehyde, formic acid, acetic acid, other hydrocarbon oxidation products, and particulate. Hazardous polymerization will not occur.

11. Toxicological Information

Acute Toxicity:	Oral toxicity LD50 not established. Oral exposure is not a likely route for toxicity.
Skin Corrosion/Irritation:	Skin irritation may result from mechanical abrasion during exposure to dust.
Skin Sensitization:	Not established
Serious Eye Damage/Irritation:	Dust can cause eye irritation.
Respiratory Sensitization:	Not established
Germ Cell Mutagenicity:	Not established
Carcinogenicity:	Based on available evidence, IARC has determined that wood dust is a human carcinogen when inhaled. IARC has also determined that there is sufficient evidence to classify carbon black as a suspected human carcinogen when inhaled based on animal studies. Exposure to both wood fiber and carbon black is virtually eliminated when they are incorporated into a matrix of plastic in the finished product.
Reproductive Toxicity:	Not Established
STOT – Single Exposure:	Not Established
STOT – Repeated Exposure:	Not Established
Aspiration Hazard:	Dust from cutting or milling product can cause lung and throat irritation. Aspiration is only a hazard when cutting, milling, or otherwise generating dust from the product.
Likely Routes of Exposure:	Exposure to mechanically generated dust, or to smoke generated from burning can cause skin, eye, and nasal or respiratory irritation. These are the most likely routes for harmful exposure.
Symptoms:	Exposure to dust may cause or contribute to temporary skin or eye irritation. Exposure to smoke generated from burning product can cause headaches and dizziness. Remove from smoke area and administer fresh air.

Immediate effects of exposure to dust can include eye irritation and nasal or respiratory irritation. No long term effects of exposure to product or dust from product are known. Incorporating wood dust and carbon black into a polymer matrix greatly reduces the identified exposure pathway to these materials.

Mixture Ingredient Chronic Toxicology

Wood Dust: Based on available evidence, IARC has determined that wood dust causes cancer of the nasal cavity and paranasal sinuses and of the nasopharynx. [1]

Wood Dust	mg/m3	Interpretation	Carcinogenicity
IARC (mono100C-15)		Human Carcinogen	Group 1
NIOSH (total)	15	TWA	
NIOSH (resp.)	5	TWA	
OSHA (PEL)	15	STEL – 15 Min.	
OSHA (PEL)	5	TWA	
Alberta (8 Hr. OEL)	5	Total Fraction	
ACGIH (PEL)	1	Inhalable Fraction	
Canada Labour Code	1	OEL	

Carbon Black: IARC has determined that there is sufficient evidence to classify carbon black as possibly carcinogenic to humans when inhaled based on animal studies. [2]

Carbon Black	mg/m3	Interpretation	Carcinogenicity
ACGIH (TLV)	3.5	TWA	Group A4
NIOSH (REL)	3.5	10-h TWA	
OSHA (PEL)	3.5	TWQ	
IARC		Possible Human Carcinogen	Group 2B
Cal. OSHA	3.5	TWA	

Zinc Borate: OSHA has published permissible exposure limits for total dust and respirable dust that are applicable to zinc borate.

Zinc Borate	mg/m3	Interpretation	Carcinogenicity
OSHA	15	PEL (Total Dust)	
OSHA	5	PEL (Respirable Dust)	

1. *IARC Monograph 100C-15, Wood Dust*
2. *IARC Monograph 93-6, Carbon Black*

Product is a matrix of polyethylene with other ingredients contained or encapsulated within the polyethylene matrix. Due to the structure of the polyethylene matrix, the material is not well suited to create small dust particles when sawn or milled.

12. Ecological Information

Ecotoxicity:	This material may obstruct digestive tracts of birds or wildlife if particles created by cutting or milling near construction sites are eaten. However, the material should not be toxic to such animals. This material is not expected to leach zinc borate which can be toxic to fish, aquatic plants, and invertebrate protozoan.
Bioaccumulative:	This material is not bioaccumulative.
Mobility in Soil:	This material is not mobile in soil.
Environmental Fate:	This material is not expected to be readily biodegradable.

13. Disposal Information

Waste Disposal:	Dispose of waste as normal solid waste in accordance with local, state, and national regulations.
Recycling:	The product is recyclable by the manufacturer if returned to the manufacture. Packaging material including plastic sheeting, plastic corners, strapping, wood, and corrugated material are all recyclable if a local recycling/recovery programs exists that accept those materials.
RCRA:	Unused product is not listed by U.S. EPA as a hazardous waste (40 CFR part 261 D) nor is it formulated with materials that are listed as hazardous waste. Product does not exhibit the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity.

14. Transportation Information

UN Number:	Not a dangerous good.
UN Proper Shipping Name:	Not a dangerous good.
Transport Hazard Class(es):	Not a dangerous good.
Packing Group:	Not a dangerous good.
Environmental Hazard:	Not a known marine pollutant or dangerous good.
Special Precaution for User:	Not a dangerous good.
Transport in Bulk/Annex II of MARPOL 7378 and IBC Code	Not a dangerous good.

15. Regulatory Information

Montreal Protocol:	Not subject to the Montreal Protocol. [3]
Stockholm Convention:	Not subject to the Stockholm Convention. [4]
Rotterdam Convention:	Not subject to the Rotterdam Convention. [5]
TSCA:	All component chemicals are TSCA compliant.
RCRA (C):	Not regulated
CERCLA:	Not regulated
SARA Title III	This product contains no extremely hazardous chemicals
SARA Title III, Section 313	Zinc Borate is regulated as a Form R reportable chemical under the category "zinc compounds".

3. *Montreal Protocol on Substances that Deplete the Ozone Layer*
4. *Stockholm Convention on Persistent Organic Pollutants*
5. *Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals*

16. Other Information

This Safety Data Sheet (SDS) has been prepared to replace the previously used Material Safety Data Sheet. This SDS has been constructed to comply with the Global Harmonized System of Classification and Labeling Chemicals, Third Revised Edition adopted in 2009.

This SDS has been prepared on the basis of information provided by our suppliers and others that we feel are reliable. To the best of our knowledge, the information, data, and recommendations contained herein is accurate and is provided in good faith. However, A.E.R.T., Inc. (Advanced Environmental Recycling Technologies, Inc.) makes no representation regarding the comprehensiveness of the information and consequently assumes no liability whatsoever for the information contained herein. This SDS shall be used only as a guide for handling the product. In the course of using or handling the product other considerations may arise. The conditions related to using, handling, storing, and disposing of the product are beyond the control of the manufacturer. Therefore, no warranty, expressed or implied, shall be created or inferred by any statement in this SDS. No responsibility is assumed regarding the accuracy, completeness, or suitability of the information contained herein or the results obtained from its use. 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. Nothing contained herein is intended as a recommendation for uses that may infringe patents or other protected rights. Appropriate instructions for use including safe handling procedures should be provided to all handlers and users. The user should fully comply with local, state, national, and international regulations concerning the use of this product.

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