

PHYSICAL / CHEMICAL HAZARDS:

No significant hazards.

ENVIRONMENTAL HAZARDS:

No significant hazards.

NFPA HAZARD ID:

Health: 0 Flammability: 1 Reactivity: 0

EMERGENCY RESPONSE DATA:

Brown or Gray solid. Exposure to fire can generate toxic fumes. High dust levels may create potential for explosion. DOT ERG No. – NA

3. Composition/Information on Ingredients

Component Name	CAS#	Concentration
Wood Fiber Dust	None	45-55%
Polyethylene	9002-88-4	35-45%
Lubricant	None	0-6%
Coupling Agent	None	0-3%
Colorant	None	0-3%
Zinc Borate	138265-88-0	0-2%
Carbon Black	1333-86-4	0-1%

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

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.

SKIN CONTACT: Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INHALATION: If respiratory irritation, cough, shortness of breath, wheezing or chest tightness occurs after exposure to dust, remove from further exposure, seek immediate medical assistance and call for a physician.

INGESTION: Not expected to be a problem when ingested. If uncomfortable, seek medical assistance.

Section 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.

Section 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.

Section 7 - Handling and Storage

Precautions for Safe Handling:

MoistureShield® is not intended for use in load bearing or heavy structural applications.

MoistureShield Elevate® Decking and Accessories are 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 other heating systems not specifically designed to combust wood and polyethylene mixtures.

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.

Do not store near strong oxidizing agents or combustible materials.

Keep product covered or in packaging until used to prevent premature or uneven fading.

Section 8 - Exposure Control and Personal Protection

Control Parameters

Substance Name	CAS No.	OSHA PEL mg/m ³	OSHA STEL mg/m ³
Wood Dust (Hardwood)	NA	5	10
Carbon Black	1333-86-4	3.5	N/E

Substance Name	CAS No.	OSHA PEL mg/m ³ Respirable, Dust	OSHA PEL mg/m ³ 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.

Section 9 - Physical Data

Appearance	Solid linear profiles colored brown and gray.
Odor	None
Odor Threshold	Not Applicable
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	0.97 g/cm
Solubility in Water	Negligible
Partition Coefficient	Not Applicable
Auto-ignition Temperature	343°C / 650°F (estimate)
Decomposition Temperature	290°C / 554°F (thermal degradation/ICAC 1400)
Viscosity at 100°C	Not Applicable

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.

Section 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 Labor 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.

Section 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.

Section 13 - Disposal Considerations

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 manufacturer. 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.

Section 14 - Transportation Information

UN Number:	Not a dangerous good.
UN Proper Shipping Name:	Not a dangerous good.
Transport Hazard Class:	Not a dangerous good.
Packing Group:	Not a dangerous good.
Environmental Hazard:	Not a 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.

Section 15 - Regulatory Information

TSCA:	All components comply with TSCA.
RCRA:	Not Regulated
CERCLA:	This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) REPORTABLE HAZARD CATEGORIES:	Chronic
SARA (313):	Zinc Borate is regulated as a Form R reportable chemical under the category "zinc compounds".

The following product ingredients are cited on the lists below:

Chemical Name	List Citations
Wood Fiber Dust	1, 2, 6
Carbon Black	8

----REGULATORY LISTS SEARCHED----

1 - ACGIH ALL	6 - IARC 1	11 - TSCA 4	17 - CA P65	22 - MI 293
2 - ACGIH AL	7 - IARC 2A	12 - TSCA 5A2	18 - CA RTK	23 - MN RTK
3 - ACGIH A2	8 - IARC 2B	13 - TSCA 5E	19 - FL RTK	24 - NJ RTK
4 - NTP CARC	9 - OSHA CARC	14 - TSCA 6	20 - IL RTK	25 - PA RTK
5 - NTP SUS	10 - OSHA Z	15 - TSCA 12B	21 - LA RTK	26 - RI RTK

CODE KEY: CARC = CARCINOGEN SUS = SUSPECTED CARCINOGEN

USE: COMPOSITE LUMBER PRODUCTS

INGREDIENT	PCT
Wood Fiber	40-50%
Polyethylene	25-35%
Carbon Black	0-1%

Section 16 - Other Information

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, MoistureShield 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.

Always use the most current version of this document available from MoistureShield at the contact information supplied above.

For distributors, suppliers, and end-users in the state of California:

⚠ WARNING: This product can expose you to carbon black and wood dust, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.