According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

SECTION 1: Identification

Product Identifier

Product Name: Bone Dry EM Coating Coupling Agent

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Interface additive and adhesion promoter for coatings. Sizing agent for glass fibers used in insulation and reinforcement.
Uses Advised Against: Any use other than recommended above.

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer:

United States Bone Dry Products 9009 58th Pl Kenosha, WI 53144 262-694-9748 info@bonedryproducts.com

Emergency Telephone Number:

United States Bone Dry Products 262-694-9748 (8am-5pm)

SECTION 2: Hazard(s) Identification

GHS Classification:

Serious eye damage, category 1 Specific target organ toxicity - single exposure, category 1

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H318 Causes serious eye damage H370 Causes damage to optic nerve

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray

P264 Wash thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P280 Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 Immediately call a doctor

P321 Specific treatment (see Sections 4 - 8 of this SDS and any supplemental information on the product



According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

label)

P307+P311 If exposed: Call a POISON CENTER or physician P405 Store locked up P501 Dispose of contents and container in accordance with local, regional, national, and international regulations

Hazards Not Otherwise Classified:

May form siloxane polymer on contact with skin, eyes or lungs.

May be harmful or fatal if swallowed due to hydrolyzation of silane to form toxic methanol.

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: 2530-83-8	Silane	>99
CAS Number: 67-56-1	Methanol	0.1-1

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After Skin Contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Acute Symptoms and Effects:

May form siloxane polymer on contact with skin, eyes, or lungs.

Toxic if swallowed. This product hydrolyzes in the stomach to form methanol which is toxic by ingestion. Methanol may cause nausea, abdominal pain, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behavior, visual disturbances, drowsiness, coma, and death. There may be a delay of several hours between swallowing methanol and the onset of signs and symptoms. The effects observed are in part due to acidosis and partially to cerebral edema. Visual effects include blurred vision, diplopia, changes in color perception, restriction of visual fields, complete blindness. Ingestion of moderate quantities of methanol also produces metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. 60-200 ml methanol is fatal dose for most adults. Ingestion of as little as 10 ml methanol has caused blindness. With massive overdoses, liver, kidney and heart muscle injuries have been described.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, excessive blinking, corneal damage and loss of vision.

Prolonged skin contact may result in irritation, local redness and increased pigmentation of the skin. Inhalation of product vapor generated at ambient temperature is not expected to product any adverse, acute effects. However, this material is capable of forming methanol if hydrolyzed. Methanol vapor may cause dizziness, drowsiness, disturbances of vision, and tingling, numbness, and shooting pains in the hands and forearms.

Exposure to methanol may damage the optic nerve and central nervous system.

May aggravate: - an existing liver disease - pre-existing upper respiratory tract and lung diseases, such as, but not limited to, bronchitis, emphysema and asthma Allergies. May cause eczema-like skin disorders (dermatitis).

Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time).

Immediate Medical Attention and Special Treatment

Specific Treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

If exhibiting symptoms of exposure, seek prompt medical attention.

If swallowed, seek immediate medical attention.

Notes for the Doctor:

Treat symptomatically.

Product may hydrolyse upon contact with body fluids in the gastrointestinal tract to produce additional methanol; therefore, consider the signs/symptoms of methanol poisoning and also observe the known latency period of several days.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating and toxic fumes including carbon oxides and silicon oxides.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. All equipment used when handling the product must be grounded. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Stop leak if you can do it without risk. Wipe, scrape or soak up with a suitable, inert absorbent. Place recovered material in a suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Wash walking surfaces with detergent and water to reduce slipping hazard.

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Do not taste or swallow. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Prevent contact/contamination with water. Keep containers tightly closed when not in use.

Other Precautions: HYDROLYSIS - The epoxysilane esters are not monomers in the usual sense, but polymeric materials may be produced under certain conditions of catalyzed partial hydrolysis. Polysiloxanes are produced by polymerization of the silyl ester group in the presence of controlled amounts of water and alkali or acid catalyst at ambient temperatures. At slightly higher temperatures (ca. 50 °C), polyglycols or polyglycol ethers are produced via the epoxy functional group under the same conditions of water concentration and alkali or acid catalyst. In as much as both of these reactions are exothermic and may occur simultaneously, the heat evolved may be cumulative and greatly accelerate the rate of reactions. It is imperative, therefore, that unintentional contamination of the epoxysilane esters with water be avoided, and that intentional hydrolysis be properly controlled to avoid hazardous consequences.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly closed. Purge opened containers with bone dry inert gas before resealing. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Bone Dry EM Coating Coupling Agent

Initial Preparation Date: 09.02.2022

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Methanol	67-56-1	8-Hour TWA: 200 ppm
	Methanol	67-56-1	15-Minute STEL: 250 ppm
OSHA	Methanol	67-56-1	8-Hour TWA-PEL: 260 mg/m ³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 325 mg/m ³ (250 ppm)
United States(California)	Methanol	67-56-1	15-Minute STEL: 325 mg/m ³ (250 ppm)
	Methanol	67-56-1	PEL Ceiling: 1000 ppm
	Methanol	67-56-1	8-Hour TWA: 260 mg/m ³ (200 ppm)
NIOSH	Methanol	67-56-1	REL-TWA: 260 mg/m ³ (200 ppm [for up to a 10-hour workday during a 40-hour workweek])
	Methanol	67-56-1	15-Minute STEL: 325 mg/m ³ (250 ppm)
	Methanol	67-56-1	IDLH: 6000 ppm

Biological Limit Values:

Country (Legal Basis)	Substance		Determin ant	•		Permissibl e limits
ACGIH	Methanol	67-56-1	Methanol	Urine	End of Shift	15 mg/L
	Methanol	67-56-1	Methanol		End of shift.	15 mg/L

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, in an oxygen deficient atmosphere, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Appearance	Colorless Liquid
Odor	Ester - like
Odor threshold	Not determined or not available.
рН	Not determined or not available.
Melting point/freezing point	< -70 °C (-94 °F)
Initial boiling point/range	290 °C (554 °F)
Flash point (closed cup)	110 °C (230 °F)
Evaporation rate	<1 (Butyl acetate = 1)
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	< 0.75 mmHg @ 20 °C
Vapor density	Not determined or not available.
Density	1.07 g/cm ³
Relative density	Not determined or not available.
Solubilities	Reactive with water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Information on Basic Physical and Chemical Properties

SECTION 10: Stability and Reactivity

Reactivity:

HAZARDOUS POLYMERIZATION: Polymerization -Hydrolysis - The epoxysilane esters are not monomers in the usual sense, but polymeric materials may be produced under certain conditions of catalyzed partial hydrolysis. Polysiloxanes are produced by polymerization of the silyl ester group in the presence of controlled amounts of water and alkali or acid catalyst at ambient temperatures. At slightly higher temperatures (ca. 50 °C), polyglycols or polyglycol ethers are produced via the epoxy functional group under the same conditions of water concentration and alkali or acid catalyst. In as much as both of these

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Bone Dry EM Coating Coupling Agent

reactions are exothermic and may occur simultaneously, the heat evolved may be cumulative and greatly accelerate the rate of reactions. It is imperative, therefore, that unintentional contamination of the epoxysilane esters with water be avoided, and that intentional hydrolysis be properly controlled to avoid hazardous consequences.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:

HAZARDOUS POLYMERIZATION: Polymerization -Hydrolysis - The epoxysilane esters are not monomers in the usual sense, but polymeric materials may be produced under certain conditions of catalyzed partial hydrolysis. Polysiloxanes are produced by polymerization of the silyl ester group in the presence of controlled amounts of water and alkali or acid catalyst at ambient temperatures. At slightly higher temperatures (ca. 50 °C), polyglycols or polyglycol ethers are produced via the epoxy functional group under the same conditions of water concentration and alkali or acid catalyst. In as much as both of these reactions are exothermic and may occur simultaneously, the heat evolved may be cumulative and greatly accelerate the rate of reactions. It is imperative, therefore, that unintentional contamination of the epoxysilane esters with water be avoided, and that intentional hydrolysis be properly controlled to avoid hazardous consequences.

Conditions to Avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources, water, temperature > 300 °C and incompatible materials.

Incompatible Materials:

Water; reacts with water to form methanol.

Hazardous Decomposition Products:

Thermal decomposition products include carbon oxides and silicon oxides

SECTION 11: Toxicological Information

Acute Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Route	Result
Silane	dermal	LD50 Rabbit: 4247 mg/kg
	oral	LD50 Rat: 8025 mg/kg
	inhalation	LC50 Rat: >5.3 mg/L (4 hr - Aerosol)
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr [vapor])

Skin Corrosion/Irritation

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

Substance Data:

Name	Result
Silane	Causes serious eye damage.
espiratory or Skin Sei	
	on available data, the classification criteria are not met.
Product Data:	shavalable data, the classification enterna die not met.
No data available.	
Substance Data: No	data available.
arcinogenicity	
	on available data, the classification criteria are not met.
Product Data: No dat	
Substance Data: No	data available.
International Agenc	y for Research on Cancer (IARC): None of the ingredients are listed.
National Toxicology	Program (NTP): None of the ingredients are listed.
OSHA Carcinogens:	Not applicable
erm Cell Mutagenicity	
Assessment: Based of	on available data, the classification criteria are not met.
Product Data:	
No data available.	
Substance Data: No	data available.
eproductive Toxicity	
Assessment: Based of	on available data, the classification criteria are not met.
Product Data:	
No data available.	
Substance Data: No	
	Toxicity (Single Exposure)
Assessment:	070205
Causes damage to Product Data:	organs.
No data available.	
Substance Data:	
Name	Result
Methanol	
	Causes damage to Optic nerve (nervus opticus), central nervous system.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:

Inhalation; Ingestion; Skin contact; Eye contact

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

Refer to Section 4 of this SDS. **Other Information:**

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

•	
Name	Result
Silane	Aquatic Plants EC50 Algae: 350 mg/L (96 hr [growth rate])
	Fish LC50 Cyprinus carpio: 55 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 473 mg/L (48 hr [mobility])

Chronic (Long-Term) Toxicity

Assessment:

Harmful to aquatic life with long lasting effects.

Product Data: No data available.

Substance Data: No data available.

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
	The substance is not readily biodegradable. 37% degradation, measured by DOC removal, after 28 days.
Methanol	Readily biodegradable (97% degradation after 20 days).

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
	The substance has a low potential for bioaccumulation based on log Kow <=3 and a low potential to cross biological membranes.
	This substance does not significantly bioaccumulate in fish. Experimental BCFs of < 10 in fish species.

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
	The physicochemical properties of the substance indicate that it can be expected to have a low potential for adsorption to soil and sediment.
Methanol	Highly mobile (Koc: 0.13 - 0.61 dimensionless).

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT. **vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Silane	The substance is not PBT.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 09.02.2022

Bone Dry EM Coating Coupling Agent

Methanol	This substance is not PBT.
vPvB assessment:	
Silane	The substance is not vPvB.
Methanol	This substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory agencies. Dispose of in accordance with all applicable local, regional, state and federal regulations.

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Listed

Initial Preparation Date: 09.02.2022 Bone Dry EM Coating Coupling Agent

SA		nder TSCA Section 12(b): None of the ingredients are listed. Tremely Hazardous Substances: None of the ingredients are listed. Kic Chemicals:		
	67-56-1	Methanol	Listed	

CE				
	67-56-1	Methanol	Listed	5000 lbs
RC	RA:			
	67-56-1	Methanol	Listed	U154
See	tion 112(r) of the	Clean Air Act (CAA): None of the ingredients are listed.		
Ма	ssachusetts Right t	to Know:		
	67-56-1	Methanol		Listed

New Jersey Right to Know:			
67-56-1	Methanol	Listed	
New York Right to Know:			
67-56-1	Methanol	Listed	
Pennsylvania Right to Know:			

67-56-1 Methanol

California Proposition 65:

▲ WARNING: This product can expose you to Methanol; which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-1-1

HMIS: 2-1-1

Initial Preparation Date: 09.02.2022

End of Safety Data Sheet