

Material Safety Data Sheet



ArcusStone®

Date: 7.1.08

1. Product and Company Information

Product Name: **Bonding Agent**

HMIS Classification: **Health: 1 Flammability: 0 Physical Hazard: 0**

Personal Protection: I (safety glasses, gloves, and vapor respirator)

Product Use: Liquid re-emulsifying bonder applied to most substrates prior to application of ArcusStone® coatings.

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2. Composition / Information on Hazardous Ingredients

Ingredients	%	CAS#	ACGIH	ACGIH	OSHA	OSHA
			TWA	STEL	TWA	STEL
			(ppm)	(ppm)	(ppm)	(ppm)
Vinyl Acetate Homopolymer	48 av.	9003-20-7	N/E	N/E	N/E	N/E
Butyl Benzyl Phthalate	<5.0	85-68-7	N/E	N/E	N/E	N/E
Hexylene Glycol	<1.0	629-11-8	25	N/E	N/E	N/E
Vinyl Acetate Monomer	<0.10	108-05-4	10	15	10	20

OSHA Hazardous Communication Standard 29 CFR 1910.1200 allows the MSDS information as to non-hazardous components to be unlisted if they are considered proprietary, therefore, identities of proprietary ingredients in this product are not listed here.

3. Hazards Identification

Routes of exposure:

Skin contact : Yes

Skin Absorption: No

Eye Contact: Yes

Inhalation: Yes

Ingestion: Yes

Emergency Overview:

Signs and symptoms of acute exposure may be a mild irritation to the upper respiratory tract. Signs and symptoms of prolonged exposure may include minor sore throat. Remove subject from product exposure until symptoms subside.

Potential Health Effects:

Inhalation of vapors may cause slight irritation in respiratory tract, and repeated or prolonged exposure to low concentrations of vapor may cause sore throat, which is transient.

4. First Aid Measures

Skin: Wash affected areas thoroughly with soap and water for at least 5 minutes. Consult Physician if irritation persists.

Eyes: In the event of direct contact, rinse / flood eyes with clean water immediately and repeatedly for at least 5 minutes. Seek medical attention if irritation persists.

Ingestion: Immediately consult a physician. Induce vomiting only as directed by medical personnel. Do not give anything by mouth to an unconscious person.

For Gross Inhalation: Immediately move subject to fresh air. Seek immediate medical attention. If breathing has stopped or is significantly impaired, give artificial respiration.

5. Fire Fighting Measures

Flammable: Not flammable or combustible.

Means of Extinction: Use water, foam, dry chemical or carbon dioxide on dried film.

Flashpoint: non-flammable in liquid state.

Upper Flammable Limit (% by volume): N/A

Lower Flammable Limit (% by volume): N/A

Auto ignition Temperature: Will not auto ignite.

Explosion Data – Sensitivity to Impact: Will not explode.

Explosion Data – Sensitivity to Static Discharge: Possibility of pressure buildup in closed containers. Use water stream to cool before opening.

Hazardous Combustion Products: N/A

NFPA: Non-combustible classification.

6. Accidental Release Measures

Leak and Spill Procedures:

Stop the leak and ventilate area. Construct a containment dike to limit the spread of material. Mix with a dry soil or other non-reactive absorbent and place in container then dispose of as common waste. Flush contaminated area with water as soon as possible before material dries. Wear butyl rubber protective gloves, footwear, and clothing if cleaning up larger spills. For disposal, see Section 13, "Disposal Considerations".

Product is not considered a hazardous waste under EPA Hazardous Waste Regulation 40 CFR 261.

7. Handling and Storage

Handling Procedures and Equipment:

Handle with adequate ventilation and avoid direct and prolonged breathing of vapors. Do not eat, drink, smoke, or otherwise allow wet material to contact mucus membranes or skin while handling. To avoid possible back strain or other injury, use a back brace, hand truck, pallet jack, or fork lift to move material containers.

Storage Requirements:

Store away from oxidizing agents. Store unopened in manufacturer's original pails out of direct sunlight, extreme heat or cold, precipitation, and weather exposure. Rotate stock. Do not stack more than 2 pallets in height. Product shelf life is one year from date of manufacture, in unopened containers. Store where temperature is between 40 ° and 100 ° F. (4.5 ° and 38 ° C). Avoid freezing. If frozen solid, discard. If product has sustained partial freezing, it can be recovered by leaving it to thaw at room temperature. Do not apply additional heat during this process. Completely hand stir product before use. Do not use a mechanical mixer or shaker.

8. Exposure Control / Personal Protection

Exposure Limits:

ACGIH TWA: 10

ACGIH STEL: 15

OSHA TWA: 10

OSHA STEL: 20

Minimize exposure in accordance with good hygiene practice. Following work, workers should shower with soap and water.

Engineering Controls:

General - None required.

Local Exhaust - Maintain air concentrations in accordance with values given in Section 2 of this publication.

Personal Protective Equipment:

Eye - Chemical tight splash goggles (ANSI Z-87, 1, or approved equal) required.

Respiratory - Not normally required if good ventilation is maintained. Use of an appropriate OSHA MSHA or NIOSH approved respirator in poorly ventilated areas is required.

Hand - latex, vinyl, or rubber gloves are recommended but typically not required.

Other - Provide means of rinsing eyes (eyewash station) in case of emergency.

9. Physical and Chemical Properties

Physical State: Liquid

Odor and Appearance: No distinct odor. Light beige in color with a mildly sweet odor

Odor Threshold (ppm): no designation

Specific Gravity (H₂O =1): 1.08

Vapor Density (air =1): water vapor

Vapor Pressure (mmHg): 18.62 @ 68 ° F (20 ° C)

Evaporation Rate (Ether = 1): no designation

Boiling Point: 212 ° F. (100 ° C)

Freezing Point: 32 ° F. (0 ° C)

Melting Point: N/A

pH (in water): 5.4

Solubility in Water: Dilutable

Molecular Weight: mixture

10. Stability and Reactivity

Chemical Stability:

Stable at ambient temperatures

Incompatibility with other substances:

Reactive metals, sodium, calcium

Reactivity:

Hazardous polymerization will not occur.

Hazardous Decomposition Products from Burning, Heating, or Reaction with Other Materials:

The level of acetaldehyde may increase due to hydrolysis of residual vinyl acetate monomer. Other decomposition products may include; carbon monoxide and carbon dioxide in a fire; aldehydes, and acetic acid. Above 428 ° F (220 ° C), the polyvinyl alcohol yellows and starts to decompose, but decomposition is insignificant below 428 ° F (220 ° C).

11. Toxicological Information

Effects of Acute Exposure:

Can cause slight irritation to the upper respiratory tract.

Effects of Chronic Exposure:

Vapors can cause inflammation of the lining tissue of the interior nose, throat, and upper respiratory tract, which may cause transient sore throat.

Irritancy of Product:

Exposure can affect the skin, eyes and mucous membrane.

Respiratory Sensitization:

Mild and temporary sore throat may occur with extended inhalation of vapors in poorly ventilated areas.

Carcinogenicity:

No carcinogens in concentrations of 0.1% or greater under OSHA, NTP, IARC, AGCIH, and Calif. Prop. 6.

NTP – Not classified.

OSHA regulated – Not as a carcinogen.

IARC Monographs – No

Calif. Prop. 65 – No

Chronic / Sub chronic Data:

Although formaldehyde is a very minor yet volatile component of this product, it is important to recognize that test results have shown formaldehyde to cause cancer in laboratory animals. Normally, Formaldehyde is readily detected due to its strong odor; however, odor detection levels vary among individuals between 0.2 and 1 ppm. Whether a risk exists below the odor threshold has not been determined. Under normal conditions of use in well ventilated areas, the concentration of minor components of formaldehyde will not exceed TLV or PEL.

VOC Content:

SCAQMD Rule 443.1 (g/L) = 5.9; (lbs/gal) = 0.049

SCAQMD Rule 443.1 (g/L coating less water) = 13; (lbs / gal coating less water) = 0.10

CARB Method 310 (Wt %) = 0.54

EPA Method 24 (Wt fraction) = 0.0054

12. Ecological Information

Aquatic Toxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Not available.

Toxicity of Products of Biodegradation: Not available.

13. Disposal Considerations

Waste Disposal:

Can be disposed as common waste in small quantities < 100 gallons (378.5 L), to municipal or industrial wastewater treatment plants, with prior approval from these authorities and in accordance with local, state, provincial, and federal regulations. For > 100 gallons (378.5l), disposal through a licensed disposal facility is recommended.

Product does impart a milky color to water, which may not be removed or sufficiently diluted by the treatment facility. The product can be chemically or biologically degraded.

14. Transport Information

PIN - N/A

TDG - N/A

DOT - Classified as Non-hazardous, not regulated. Keep from freezing.

IMO - N/A

ICAO - Not regulated. Keep from freezing.

IATA - Not regulated. Keep from freezing.

15. Regulatory Information

WHMIS Classification - N/A

OSHA Hazardous Communication Standard (29CFR 1910.1200) hazard classes - None

SARA - Product does not contain any toxic chemicals subject to reporting requirements of Sections 312 and 313 of The Superfund Amendments and Reauthorization Act of 1986.

TSCA - All product ingredients are included in the EPA TSCA .

Calif. Prop 65 - Formaldehyde and Acetaldehyde.

16. Other Information

Abbreviations:

ACGIH - American Conference of Governmental Hygienists

ANSI - American National Standards Institute

C - Celsius

Cal/OSHA - Calif. Division of Occupational Health Administration

CARB - California Air Resources Board

CAS - Chemical Abstract Service

CERCLA - Comprehensive Environmental Response and Liability Act (Superfund) of 1980

CFR 49 - Title 49 of the Code of Federal Regulations

DOT - Department of Transportation

EPA - Environmental Protection Agency

F - Fahrenheit

HMIS - Hazardous Materials Identification System

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

ICAO - International Civil Aviation Organization

IMO - International Maritime Organization

M³ - Cubic Meter

Mg - milligram

MSDS - Material Safety Data Sheet

N/A - Not Applicable

N/E - Not Established

NFPA - National Fire Protection Association

NIOSH - National Institute of Occupational Safety and Health

NTP - National Toxicity Program

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

RCRA - Resource Conservation and Recovery Act of 1976

SARA - Superfund Amendments and Reauthorization Act of 1986

SCAQMD - South Coast Air Quality Management District

SiO₂ - Crystalline Silica (quartz)

TGD - Transportation of Dangerous Goods Act of 1992 (Canadian)

TLV - Threshold Limit Values

TSCA - Toxic Substances Control Act of 1976

TWA - Time Weighted Average

WHMIS - Workplace Hazardous Materials Information System

Statement:

While the information provided in this MSDS is believed to provide a useful summary of the hazards of this product as it is commonly used, the MSDS cannot anticipate and provide all of the information that might be needed in every situation. In particular, product users who have not had the benefit of proper training in the application of the product may be using it in a manner that this MSDS does not address or that may be hazardous. The information herein is given in good faith but no warranty, expressed or implied, is made.