

Material Safety Data Sheet

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ArcusStone Products LLC

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HMIS

| | |
|---------------------|---|
| Health | 1 |
| Flammability | 0 |
| Reactivity | 0 |
| Personal Protection | A |

SECTION 1. IDENTIFICATION

Product Name:

ArcusBond™

Manufacturer: ArcusStone Products LLC 180 Harbor Drive, Suite 200, Sausalito, CA 94965, (415) 339.4060

SECTION 2. TRANSPORTATION INFORMATION

DOT Classification: Non-hazardous. Not regulated. Keep from freezing. Shipping name - Resin Compound.

ICAO / IATA Classification: Non-hazardous. Not IATA regulated. Keep from freezing.

SECTION 3. COMPONENTS AND EXPOSURE LIMITS

| <u>Chemical Name</u> | <u>CAS #</u> | <u>OSHA TWA</u> ppm | <u>OSHA STEL</u> ppm | <u>ACGIH TWA</u> ppm | <u>ACGIH STEL</u> ppm |
|---------------------------|--------------|------------------------|-------------------------|-------------------------|--------------------------|
| Vinyl Acetate Monomer | 108-05-4 | 10 | 20 | 10 | 15 |
| Hexylene Glycol | 629-11-8 | N/E | N/E | 25 | N/E |
| Butyl Benzyl Phthalate | 85-68-7 | N/E | N/E | N/E | N/E |
| Vinyl Acetate Homopolymer | 9003-20-7 | N/E | N/E | N/E | N/E |
| Water | 7732-18-5 | N/E | N/E | N/E | N/E |

Other: Remaining components are trade secrets, none of which are toxic or hazardous.

Trace Elements:

Trace amounts of naturally occurring, potentially harmful chemicals may be detected during chemical analysis.

SECTION 4. PHYSICAL DATA

Physical Form: Liquid

Color: Light beige

Odor: Slightly Sweet

Specific Gravity (H₂O=1): 1.08

Vapor Density (mm Hg@21C): 18.62

Molecular Weight: Mixture

Solubility in water: 100%

pH: 5.2 - 5.6

Melting Point: No data.

Boiling Point: <100C (<212 F)

SECTION 5. FIRE AND EXPLOSION HAZARD DATA

Flash Point: No data.

Hazardous Combustion Products: None.

Unusual Fire and Explosion Hazards: Water (H₂O), carbon dioxide (CO₂), carbon monoxide (CO), and smoke are produced when dried polymer burns.

Fire Hazard Classification (OSHA/NFPA): Non-combustible.

Extinguishing Media: Not flammable.

Special Fire Fighting Procedures: None.

Auto ignition Temperature: No data.

Upper Explosion Limit (UEL): No data.

Lower Explosion Limit (LEL): No data.

SECTION 6. REACTIVITY DATA

Stability: Stable at ambient temperatures. Will coagulate from freezing, thawing or boiling.

Incompatibility : Reactive metals.

Conditions to avoid: Freezing, thawing, and boiling.

Hazardous Decomposition Products: Level of acetaldehyde may increase due to hydrolysis of residual vinyl acetate monomer; Carbon Dioxide in a fire; Carbon Monoxide in a fire; Aldehydes; Acetic Acid. Above 220C the polyvinyl alcohol yellows and starts to decompose, but decomposition is insignificant if below 260C.

Hazardous Polymerization: Will not occur.

SECTION 7. HEALTH HAZARD ASSESSMENT

Carcinogenic Potential: No carcinogens in concentrations of 0.1% or greater under OSHA, NTP, IARC, AGCIH, and Calif. Prop 65.

Routes of Exposure: Skin, mucous membrane, or eye contact; inhalation or ingestion.

Medical Conditions Aggravated by Exposure: None known.

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

Other Exposure Standards and Recommendations for Proper Use of the Material: Under normal conditions of use in a well ventilated area, the concentration of minor components of Formaldehyde will not exceed the TLV or PEL. The Vinyl Acetate Monomer TWA is 10 ppm Formaldehyde in the workplace air. User should maintain air contaminant concentrations in the workplace at the lowest possible levels. Also, the minor components will migrate to the non-vented headspace in a closed container, and may exceed the TLV's or PEL's in these closed containers. Open containers in a well ventilated space.

Emergency First Aid Procedures:

Skin: Wash contaminated areas thoroughly with soap and water. If irritation persists or develops contact a physician.

Eyes: Rinse / flood eyes with clean water immediately and repeatedly for at least 15 minutes. Contact physician if irritation persists.

Ingestion: Consult a physician immediately. Induce vomiting only as directed by medical personnel.

For Gross Inhalation: Immediately move subject to fresh air, give artificial respiration as needed. Get prompt medical attention.

SECTION 8. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled: Ventilate area. Construct a containment dike to limit the spread of the material. Mix with dry soil or other nonreactive absorbent and place in container then dispose of in waste can. Flush area with water spray, and clean up any residue with brush, mop and water bucket.

Waste disposal method: For < 100 gallons, it can be treated as a common waste for disposal in accordance with local, state and federal regulations. The product can be chemically or biologically degraded. For large quantities, disposal through licensed waste disposal facilities is suggested.

SECTION 9. SPECIAL PROTECTION INFORMATION

Ventilation: Use only with adequate ventilation.

Respiratory Protection : Not normally required if good ventilation is maintained. Use of an appropriate OSHA, MSHA or NIOSH approved organic vapor respirator is recommended under emergency conditions.

Protective Clothing: No specific recommendation.

Eye Protection: Chemical tight splash goggles to avoid eye contact. (ANSI Z-87, 1 or approved equivalent) is recommended.

Other Protective Equipment: Provide means of rinsing eyes (eyewash station) in case of emergency. Provide source of water for washing skin.

SECTION 10. SPECIAL PRECAUTIONS

None

SECTION 11. TOXICOLOGICAL PROPERTIES

Formaldehyde is a very minor component of this product, and is readily detected due to its irritant properties. Odor detection levels of between 0.2 and 1 ppm are typical among various individuals. It has not been determined if a risk exists below these odor levels, however, it is important to recognize that recent test results have shown formaldehyde to cause cancer in laboratory animals.

SECTION 12. REGULATORY INFORMATION

OSHA HazCom Std (29CFR1910.1200) hazard class(es): None.

EPA SARA Title III Sec. 312 (40CFR370) hazard class: None.

EPA SARA Title III Sec. 313 (40CFR372) toxic chemicals above the minimal levels: None.

TSCA: All components are listed in the EPA Toxic Substance Control Act Chemical Substance Inventory.

Calif. Prop 65: Components known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"; Formaldehyde and Acetaldehyde.

SECTION 13. OTHER INFORMATION

Abbreviations:

ACGIH

American Conference of Governmental Industrial Hygienists

ANSI

American National Standards Institute

Cal/OSHA

California Division of Occupational Safety and Health Administration

CAS

Chemical Abstract Service

DOT

Department of Transportation

IARC

International Agency for Research on Cancer

N/E

Not Established

mg

Milligram

TSCA

Toxic Substance Control Act

MSDS

Material Safety Data Sheet

NIOSH

National Institute of Occupational Safety and Health

NTP

National Toxicology Program

OSHA

Occupational Safety and Health Administration

PEL

Permissible Exposure Limit

ppm

Parts Per Million

TLV

Threshold Limit Values

TWA

Time Weighted Average