

SAFETY DATA SHEET

Polymer Innovations, Inc.
2426 Cades Way, Vista, CA 92081 USA
Phone: 760 598-0500 Fax: 760 727-3127

SECTION 1: IDENTIFICATION

Product Name: WB4101 Binder Concentrate
Issue or Revision Date: 5/29/24
Chemical Family: Water Based Acrylic
Recommended Use: Binder for tape casting of ceramics or other powders.
Company Information: Polymer Innovations, Inc.
2426 Cades Way, Vista, CA 92081 USA
Phone Number: 1-760-598-0500
Fax Number: 1-760-727-3127
info@polymerinnovations.com

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: This product is not classified as a hazardous substance or mixture according to the OSHA Hazard Communication Standard of 2012 (29 CFR 1910.1200) or the Globally Harmonized System (GHS) of chemical classification.

GHS Label Element: No pictograms.

Signal Word: No signal words.

OSHA/HCS Status: Not a hazardous substance or mixture.

Classification of the Substance or Mixture: Not a hazardous substance or mixture.

Other Hazards Which Do Not Result in Classification: May irritate eyes and skin.

NFPA and HMIS Label Information:

NFPA: Health = 1 Flammability = 0 Reactivity = 0

HMIS: Health = 1 Flammability = 0 Reactivity = 0

Primary Routes of Exposure: Eye and skin contact.

Summary of Chronic Hazards: No appropriate human or animal data are available on the chronic health effects from prolonged or repeated exposure to this material.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>Quantity</u>	<u>Threshold level</u>	<u>Carcinogen</u>
Ammonium hydroxide (28% aqueous)	1336-21-6	< 1%	TWA 25* ppm ACGIH STEL 35* ppm OSHA	no listing
Acrylic polymers	not required	> 10%	not established	no listing
Water	7732-18-5	> 50%	not established	no listing

* As ammonia

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SECTION 4: FIRST AID MEASURES

Inhalation: If overcome by exposure to mist or hot vapors, remove victim to fresh air and obtain medical attention if breathing difficulty persists beyond 15 minutes.

Eye Contact: Immediately rinse with clean water for 20 - 30 minutes. Obtain emergency medical attention if pain or redness persists.

Skin Contact: Remove contaminated clothing as needed and wash skin thoroughly with mild soap and water.

Ingestion: Not expected to present a significant ingestion hazard under conditions of normal use. If ingested call a physician and never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Dried product may burn.

Extinguishing Media: Dry chemical, CO₂, Water fog, Water spray.

Special Fire Fighting Procedures: No special requirements.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill: Contains ammonia. Do not let spilled or leaking material enter waterways. May be toxic to aquatic life. Sweep or scrape up and containerize.

Disposal: Dispose of waste in accordance with all applicable Federal/ Provincial / State and local regulations regarding disposal.

SECTION 7: HANDLING AND STORAGE

General: Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse.

Storage: Avoid temperature extremes. 34°F to 120°F or 1°C to 49°C recommended minimum and maximum storage temperatures. Product is however freeze and thaw stable.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	CAS#	Quantity	Threshold level	Carcinogen
Ammonium hydroxide (28% aqueous)	1336-21-6	< 1%	TWA 25* ppm ACGIH STEL 35* ppm OSHA	no listing
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Respiratory: No special requirements under normal use conditions. At higher concentrated levels a NIOSH or MSHA approved respirator should be used with ammonia/methylamine cartridge and dust filter.

Eye: Safety glasses with side shields or chemical splash goggles.

Skin: No special requirements under normal use conditions. If prolonged or repeated contact is possible: any impervious material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Viscous white hazy liquid
Boiling Point: 212°F or 100°C (water)
Vapor Pressure: 17 mm HG @ 20 °C (water)
Solubility in water: Dispersible
Percent Volatiles: Greater than 50%
Freezing Point: 0°C (water)
Flash Point: Noncombustible
Lower Explosive Limit: Not applicable

Odor: Mild ammonia like
Specific Gravity: 1.0 - 1.1
Vapor Density (air=1): Not available
pH: ~6 - 7
Theoretical VOC: Less than 10 g/L
Auto-ignition Temperature: Not applicable
Upper Explosive Limit: Not applicable

SECTION 10: STABILITY AND REACTIVITY

Hazardous Polymerization: Not expected to occur.

Hazardous Decomposition Products: May generate CO, CO₂, H₂O, and acrylic monomers during thermal decomposition.

Materials to Avoid: Materials not compatible with water and substances not compatible with ordinary organics such as strong oxidizers will not be compatible with this product.

Conditions to Avoid: Avoid temperature extremes as noted under storage.

SECTION 11: TOXICOLOGICAL INFORMATION

<u>Component</u>	<u>CAS#</u>	<u>Quantity</u>	<u>Threshold level</u>	<u>Carcinogen</u>
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Acute Toxicity: No data available.

Hazards: Maybe irritating to skin and eyes.

Reproductive Toxicity: No data available.

SECTION 12: ECOLOGICAL INFORMATION

No data available.

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SECTION 13: DISPOSAL CONSIDERATIONS

Should not be released into the environment or allowed to enter drains or water ways. Dispose of in accordance with local regulations.

SECTION 14: TRANSPORTATION INFORMATION

Hazardous Material Proper Shipping Name: Not hazardous for shipping. Not regulated by DOT or IATA.

SECTION 15: REGULATORY INFORMATION

Toxic Substance Control Act (TSCA): All ingredients are listed or exempt from the TSCA inventory.

Superfund Amendments and Reauthorization Act of 1988 (SARA): Does not contain significant quantities of materials subject to reporting requirements.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): Does not contain significant amounts of materials subject to reporting requirements.

SECTION 16: OTHER INFORMATION

Abbreviations:

NISH: National Institute for Occupational Safety and Health

MSHA: Mine Safety and Health Administration

NFPA: National Fire Protection Association

HMIS: Hazardous Material Information System (National Paint and Coatings Association)

The information contained herein relates only to the specific material identified. Polymer Innovations Inc., believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty expressed or implied, is made as to the accuracy, reliability, or completeness of the information. Polymer Innovations Inc., urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.