



EP-716 MODULAR EPOXY SYSTEM

Before beginning installation, thoroughly review all product and system information and diligently study the Safety Data Sheets (SDS). Initiate the installation only once you have gained a comprehensive understanding of the product and the system. Prioritize workplace safety at all times - Personal Protective Equipment (PPE), as specified in the SDS, should be worn and utilized throughout the installation process. Remember, the longevity and performance of the final product hinge on proper surface preparation - the foundation of successful installations.

PRODUCT NAME

EP-716 Modular Epoxy System

PRODUCT DESCRIPTION & USE

The EP-716 Modular Epoxy System incorporates three Epoxy Resins (Part A) of variable viscosities: High (HV), Medium (MV), and Low (LV). It also features two Cold Cure Epoxy Resin Grades: Winter and Sub-Zero Winter. The Cold Cure Epoxy Grades, known for their varied curing speeds and lower critical curing temperatures, enable expedited curing at temperatures below 10°C (50°F). The Sub-Zero Winter grade even allows for curing at temperatures as low as -4°C (25°F) when combined with EP-716 Fast Curative (3:2 v/v mix ratio).

The EP-716 HV/MV/LV and Cold Cure Epoxy Resins provide a transparent, multifaceted, 100% solid epoxy solution, showcasing exceptional substrate wetting, efficient foam control, and outstanding flow characteristics owing to their surface-tolerant design. These resins are carefully engineered to be interchangeable with EP-716 Amine Curatives.

Our EP-716 Curatives (Part B) come in three different setting speeds - Slow, Medium, and Fast, and they maintain a 2:1 v/v mix ratio with HV/MV/LV Modular Epoxy Resins. This variety allows users to finely adjust and tailor their working time and curing speed to their needs. Other available Amine Curatives include a Moisture Mitigation Primer Curative with a relatively fast setting speed and a 2:1 v/v mix ratio, a low modulus Fast Patch Curative with a 1:1 v/v mix ratio, and a Flexible Curative with a 1:1 v/v mix ratio. The latter is designed for bridging cracks and priming less stable surfaces.

COMPATIBILITY GUIDELINES

EP-716 HV, MV, and LV variants are fully compatible with all EP-716 Curatives. However, the use of EP-716 Cold Cure Epoxy Resin Grades is not recommended in conjunction with Fast Patch Curative, Flexible Curative, or Moisture Mitigation Curative.

All EP-716 HV, MV, LV Epoxy Resins can be freely intermixed for optimal versatility. Furthermore, EP-716 Winter can be intermixed with HV, MV, LV Epoxy Resins, though it should be noted that doing so will render it incompatible with the Fast Patch Curative, Flexible Curative, and Moisture Mitigation Curative. Be aware that employing EP-716 Winter will alter the curing profile of the systems it's interchanged within a variable manner.

The EP-716 Sub-Zero Winter Epoxy Resin is compatible exclusively with EP-716 Slow, Medium, and Fast Curative, and is not recommended for use with other curatives. Furthermore, EP-716 Sub-Zero should not be utilized in conditions exceeding 7.5°C (45°F).





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ADVANTAGES & LIMITATIONS

ADVANTAGES

- Streamlines product selection, fostering efficient inventory management and minimizing product waste.
- Entirely modular system for maximum flexibility and customization.
- Offers a wide spectrum of applications and advantages.
- On-site tinting is feasible with the ALLUVERSAL Colourant for bespoke aesthetics.
- Provides seamless and impermeable coatings
- Exhibits superior surface tolerance and is highly resistant to cratering and foaming, assuring consistent finishes.
- Robust formulation is resistant to crystallization

LIMITATIONS

- Mixing incompatible Epoxy Resins with Amine Curatives may lead to product failure or undesirable results
- Inadequately prepared surfaces can lead to potential coating failures
- Contaminated substrates may result in surface tension irregularities
- Not designed for outdoor applications

COLOUR

Transparent coating in cured film. Field tinting is possible with ALLUVERSAL Colourant.

APPLICATION & USE

SURFACE PREPARATION

Ensure new concrete has been left to cure for at least 28 days. Eliminate any oil or grease residues using an appropriate surface degreaser. Thoroughly remove all curing agents, bond breakers, and foreign impurities. Mechanically dislodge any laitance or weak and crumbling surfaces, then prepare the substrate through diamond grinding or shot blasting to attain a Concrete Surface Profile (CSP) of 2 or higher. Make sure to eliminate all dust before applying the material. For more detailed instructions and guidance on surface preparation, refer to the "Alluvius Technical Bulletin SP-1".

MIXING GUIDELINES AND PROPORTIONS

The EP-716 HV, MV, LV, and Winter all adhere to a 2:1 (2 Part A to 1 Part B) mix ratio by volume (v/v) when combined with EP-716 Slow, Medium, Fast Curative, or the Moisture Mitigation Primer Curative.

For the EP-716 HV, MV, LV variants, they maintain a 1:1 (1 Part A to 1 Part B) v/v mix ratio when used with EP-716 Fast Patch Curative or Flexible Curative.

Specifically, for EP-716 Sub-Zero Winter, it follows a 3:2 (3 Part A to 2 Part B) v/v mix ratio with EP-716 Slow, Medium, and Fast Curative.

To prepare the mixture, combine the appropriate quantities of EP-716 Epoxy Resin (Part A) and EP-716 Curative (Part B) as outlined above. Mix these components using a slow-speed drill (keeping speed below 300 RPM) for a duration of two minutes to achieve a uniform blend. Care should be taken to avoid entrapping excess air into the product. Once mixing is complete, promptly pour the mixture onto the desired surface in a continuous, elongated pattern for the best results. For comprehensive instructions, techniques, and advice on mixing, refer to our resource "Alluvius Technical Bulletin: Mixing of Multiple Component Alluvius Polymeric Materials".





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APPLICATION

EP-716 can be applied using a T-bar applicator, a magic trowel, or an appropriate non-linting roller cover. For optimal application, we recommend using either a magic trowel or a T-bar applicator initially, followed by a secondary application with a non-linting roller cover to ensure even coverage.

COVERAGE RATE

EP-716 offers a versatile application rate ranging from 0.5 m² per to 5 m² per litre (20-200 sqft/gallon). This correlates to a wet film thickness of 2000 µm down to 200 µm (80 mil to 8 mil), specifically when applied on smooth, non-permeable surfaces. For roll coats, typical application rates range 2.5 m² per litre to 4 m² per litre (100-160 sqft/gallon). Do note, however, that surfaces that are porous or uneven, including those with a high surface area such as flake and quartz flooring, may result in lower coverage rates.

RECOATING

For recoating EP-716, no sanding or abrading is needed if the subsequent coating is applied within a 24-hour window. If this recoating window is exceeded, the previous coat of EP-716 will need to be sanded down to a minimum profile of 125 microns (120# mesh sanding screen).

ENVIRONMENTAL CONDITIONS DURING INSTALLATION

The environmental conditions at the time of application must be taken into account. EP-716 should not be applied if the humidity exceeds 80%. The product is suitable for application in temperatures ranging from -4°C (25°F) to 38°C (100°F).

CLEAN UP

Thoroughly clean all tools and materials with solutions or solvents compatible with epoxy coatings, such as benzyl alcohol or xylene, where approved. Rigorously wash hands and any exposed skin with warm water and soap. Any clothing that comes into contact with the product should be promptly removed. Bear in mind that once the product has hardened, it can only be removed mechanically. Roller covers are single-use and should be safely discarded once the materials have solidified.





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PROPERTIES OF MATERIAL

PROPERTY	VALUE
Solids By Volume	100% (+/- 1%)
Solids By Weight	100% (+/- 1%)
Part A Density	1.06 – 1.16 g/cm ³
Part B Density	0.96 – 1.06 g/cm ³
Mix Ratio By Volume	See Mixing Guidelines and Proportions
Mix Ratio By Weight	Not recommended
Volatile Organic Compounds (VOC)ASTM D-2369	>20 grams per liter
Pot Life (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Gelation Time (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Dry to Touch Time (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Recoating Time (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Open to Light Foot Traffic (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Open to Heavy Traffic (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Full Cure (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Combined mix viscosity (Ca. @ 25°C)	See individual EP-716 Curative for specific data
Adhesion to Dry Concrete	See individual EP-716 Curative for specific data
Adhesion to Damp Concrete	See individual EP-716 Curative for specific data
Shore D Hardness ASTM D-2240	See individual EP-716 Curative for specific data

RESTRICTIONS

- Concrete substrates must be sound and have a minimum compressive strength of 21 MPa, with a minimum surface pull-off strength of 1.5 MPa.
- The substrate must be clean, removed of any standing water and free of all contaminants, e.g., dirt, oil, grease, coatings and surface treatments, etc.
- Humidity should be less than 80% at time of application.
- Substrates with moisture content equal to or greater than 4% and up to 8% should be primed with Moisture Mitigation Primer Curative at a coverage rate no thinner than 2.5 m² per litre (100 sqft/gallon) for a wet film thickness of 400 µm (16 mil).

STORAGE & PACKAGING

Material is to be stored from 10°C (50°F) to 35°C (95°F) and away from direct sunlight. Materials are best used within 24 months of the date of manufacture if kept in original sealed containers.

The EP-716 Epoxy Resin (Part A) is available in two sizes: 10 litre (2.66 gallon) and 18.9 litre (5 gallon). Similarly, EP-716 Curatives come in two sizes: 5 litre (1.33 gallon) and 18.9 litre (5 gallon). We also offer custom packaging options for volume orders to meet your specific requirements.





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DISPOSAL

Please be aware that product containers will hold residual amounts of product and must be handled with care. Adhere to the warnings detailed on the labels at all times. All containers must be disposed of following federal, state, and local regulations to ensure responsible waste management.

HEALTH & SAFETY PRECAUTIONS

- Please consult the Safety Data Sheet (SDS) for comprehensive guidance on handling EP-716 safely.
- EP-716's components A and B are classified as hazardous chemicals
- During the mixing and application process, always wear gloves resistant to chemicals, eye protection, approved respiratory equipment, and protective clothing, as stipulated in the most recent version of the SDS
- Ensure that your workspace is well-ventilated and avoid inhaling any fumes
- EP-716 is known to sensitize skin. If the product comes into contact with your skin, cleanse immediately with warm soapy water and change out of contaminated clothing. If dermatitis symptoms occur, seek immediate medical attention.
- Prior to full-scale application, it is recommended to test EP-716 for suitability on a small area of the actual job site

ADDITIONAL NOTES

- The specifics provided for working time, cure time, and coverage should not be considered absolute; they are subject to change based on site conditions
- We strive to provide typical values to be used as a reference

DISCLAIMER

The data provided in this technical document is a culmination of our laboratory testing and practical experience. However, this document does not constitute a guarantee for the product's properties in terms of any legally stipulated warranties. Should you need further clarification or information to make an appropriate assessment, we encourage you to reach out to us directly. All Alluvius products are manufactured according to strict specifications, and while we can vouch for the quality of the product itself, we do not control the conditions under which the products are transported, stored, or handled, and we cannot predict or oversee the conditions under which they will be used. Therefore, we strongly advise each user to study this product data sheet in light of their intended handling and usage of the product and to conduct comprehensive tests before adapting the product for their specific uses. Please note that we reserve the right to alter the provided data without any prior notice.

