



MULCRETE
ARCHITECTURAL
CONCRETE ADMIXTURES

TECHNICAL DATA SHEET

POLYMER ULTRA HD

High-performance liquid polymer for GFRC, UHPC, and Wet Cast

42 lb (19 kgs)

- High-dispersion liquid polymer
- 51% polymer solids
- Excellent performance on vertical surfaces
- UV stable
- Enhances color in finished surfaces
- Reduces cracking and porosity

Complies with ASTM C-947-3.

Prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and GHS Revision 3.



POLYMER ULTRA HD TECHNICAL DATA SHEET

1. DESCRIPTION

POLYMER ULTRA HD (High Dispersion) is a medium-viscosity, high-molecular weight copolymer with **51% polymer solids**, designed for **GFRC, UHPC, and Wet Cast concrete** applications.

Its liquid form allows for immediate and homogeneous dispersion, optimizing polymer integration into the cementitious matrix without the need for dry pre-blending.

It provides high binding power for cement and mineral fillers, facilitating mixing with inert aggregates and improving mechanical performance, flexibility, and durability of concrete in high-performance architectural and structural applications.

2. PROPERTIES

POLYMER ULTRA HD significantly reduces setting and drying times in GFRC systems, achieving a functional drying time of up to **12 hours**, compared to traditional curing periods of up to **7 days** required by conventional non-polymer formulations. Drying time may vary depending on ambient humidity, temperature, and specific concrete mix design.

- Easy application on architectural and vertical surfaces
- Excellent flexibility and strength
- Low pH helps counteract cement alkalinity
- High UV stability
- Low aging rate and color stability in architectural finishes
- Forms a sealing layer that increases surface hardness
- Reduces moisture absorption
- Excellent binder, reducing cracking and crazing
- Optimal dispersion of organic and inorganic pigments (iron oxides, minerals, earth pigments, etc.)
- Enhances final color intensity

Key Benefits:

- Improves workability
- Increases resistance to mechanical loads
- Enhances flexural strength
- Improves resistance to deformation and cracking
- Provides hydrophobic properties
- Improves curing performance

3. APPLICATION

POLYMER ULTRA HD is recommended for use in **GFRC (Glass Fiber Reinforced Concrete)** mixes to enhance mechanical performance, adhesion, and durability.

Suitable for applications such as:

- GFRC concrete
- UHPC concrete
- Wet Cast concrete
- Precast concrete elements

4. DOSAGE AND METHOD OF ADDITION

The recommended dosage of POLYMER ULTRA HD is **4.0% to 12.0% by weight of cement**, depending on mix design and concrete type.

The optimal dosage should be determined through preliminary laboratory or field testing.

It is recommended to pre-mix POLYMER ULTRA HD with the mixing water and then add it to the pre-blended dry materials, ensuring uniform distribution within the cementitious matrix.

Its liquid form eliminates the need for pre-dispersion, reducing mixing time and dosing errors.

5. GENERAL PROPERTIES

Property	Value	Method
Appearance	White liquid emulsion	Visual
Solids content (%)	51 ± 2	Manufacturing method
Viscosity	Medium	Internal method
pH	Low	ISO 4316
Tg (°C)	14	Calculated
Solubility	Miscible in water	Visual

6. STORAGE

- Store in original, tightly closed containers
- Keep in a cool, dry, covered area
- Protect from direct sunlight and heat sources
- Keep out of reach of children under 10 years of age
- Shelf life: up to **12 months** from date of manufacture under recommended conditions

7. REGULATORY COMPLIANCE

- Complies with ASTM C-947-3
- Prepared in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Classified and labeled according to GHS/SGA Revision 3
- GHS/SGA chemical products and Appendix E of Mexican Official Standard NOM-018-STPS-2015

8. LIMITATIONS

- Performance may vary depending on cement type, aggregates, and curing conditions
- Preliminary testing is recommended prior to critical structural applications
- Avoid overdosing

9. CURING RECOMMENDATIONS

Proper curing is essential to achieve optimal performance.

Standard GFRG curing practices must be followed, including protection against premature drying and extreme temperature conditions.

10. TECHNICAL DISCLAIMER

The information provided in this Technical Data Sheet is based on laboratory testing and practical experience.

Since conditions of use are beyond our control, no express or implied warranty is provided. The user must determine the suitability of the product for the intended application. For health, safety, and environmental information, please refer to the Safety Data Sheet (SDS).