



# Flexisperse™ CA-47

Concrete, Mortar and Light Weight Aggregate Modifier

## Overview

- Aqueous, low odor acrylic polymer designed for modifying Portland cement-based mortars
- Solvent-free and low odor for interior construction and repair projects
- Outstanding freeze/thaw stability for exceptional job-site performance and flexibility
- Allows hydrating cement “wet-cure” systems to cure under ambient humidity conditions
- Enhances adhesion for non-reinforced masonry applications
- Increased mortar pot life for ease of use and job-site flexibility
- Maintains uniform color resistant to UV light discoloration
- Provides excellent water resistance to decrease spalling, cracking and surface degradation

## Applications

- Patching and repair mortar
- Basement waterproof coatings
- Regular and light weight spray applied coatings
- Trowel applied stuccos, Industrial/ Commercial cement flooring
- Use Flexisperse CA-47 to improve water resistance, flexural strength, adhesive and impact strength and abrasion in Portland cement-based mortar, concrete, grout and light weight aggregate
- Flexisperse CA-47 modified mortars excel in thin section, excessive vibration and heavy traffic applications
- Use Flexisperse CA-47 modified mortars for excellent adhesion to concrete, masonry, brick, wood, glass, metals, and rigid polystyrene and polyurethane foams

## Technical Information

Flexisperse CA-47 is a freeze/thaw stable low odor acrylic polymer dispersion designed for modifying concrete, mortar, grout and light weight aggregate, providing increased water and abrasion resistance, excellent adhesion, improved flexibility and compression strength. Cement mortars modified with Flexisperse CA-47 have superior flexural, impact and tensile strength, and resist debonding and cracking associated with water intrusion and exterior freezing and thawing.

Flexisperse CA-47 improves the flexural tension strength of the modified mortar, increasing the bond capacity of the mortar to the masonry unit, important in thin section, excessive vibration, and heavy traffic applications.

## Formulary

Flexisperse CA-47 is ammonia-free for low odor in-use application for interior construction and repair projects. Compared with unmodified cements that require moist-curing conditions, CA-47 modified cements are air-cured at ambient temperature and relative humidity.

Polymer modified cementitious products have a tendency to entrain air, reducing density and strength. Use of a defoamer, can reduce air entrainment for high density and associated strength. When preparing the cement, water, Flexisperse CA-47, and defoamer should be premixed, then added to the premixed cement and filler material. Flexisperse CA-47 has a plasticizing effect which may reduce the amount of water necessary compared to unmodified cement.

## Typical Properties

PROPERTY	VALUE
Appearance	Liquid emulsion
Color	Milky white
Odor	Mild
Ionic character	Anionic
Water solubility	Dispersible
% Solids	47.0±1.0
pH (as is)	9.5±1.0
Density@25°C	1.05±0.02 g/ml
Boiling Point	100°C
Flash point	None (aqueous)
Storage	Freeze/thaw stable
Shelf life	12 months

## Packaging and Handling

Flexisperse CA-47 is available in:  
Bulk (44,000 lbs)  
275 gallon totes (Net Wt. 2250 lbs)  
55 gallon plastic drums (Net Wt. 450 lbs)

Refer to the Safety Data Sheet (SDS) for information on the safe use, handling, and disposal of this product.

DOT Classification: Non-Regulated

Whether you're looking for a replacement product or an ingredient for a specific attribute, give us a call. We can provide assistance based upon your particular formulation requirements and composition; please feel free to contact us.

**Please refer to back page for important information**

## Flexisperse CA-47 Polymer modified mortar additive

Masonry is relatively strong in compression, but weak in axial and flexural tension, or bend or fracture strength. As a result, masonry is normally not assumed to resist axial and flexural tension forces. While non-reinforced masonry can properly and successfully be used in a variety of structural applications, its use is often limited in practice by the low limits on axial and flexural tension strength. The source of the low flexural tension strength in masonry construction is the bond capacity of the mortar to the masonry unit. This bond strength is typically only a fraction of the tensile strength of both the mortar and the masonry unit. Weak bond capacity leads to debonding along the mortar-unit interface, opening “cracks” in the surface of the masonry that can in turn lead to loss of adhesion and weatherability problems caused by the intrusion of water. Increasing the flexural strength of masonry mortar increases bond capacity and reduces the amount of reinforcement necessary.

When used as a polymer modified mortar additive, Flexisperse CA-47 in mortar and grout increases the flexural tensile bond strength of masonry construction for enhanced durability, resists debonding, cracking and weatherability problems resulting from water intrusion and damage from freezing and thawing. Flexisperse CA-47 modified mortar, grout and concrete exhibit excellent adhesion to a range of surfaces, extended pot life, and improved flow characteristics for spray and gunning applications.

Research has shown that the strength of cement is directly proportional to the density of the cement. Polymer modified cementitious products have a tendency to entrain air resulting in reduced density. The addition of an appropriate defoaming agent, can reduce air entrainment to maintain the highest density possible.

Cementitious Spray Coating	
Ingredient	Parts by Weight
Portland cement, type 1	100.0
XO Aggregate	100.0
Flexisperse CA-47	21.0
Defoamer may be added	
Water	to desired consistency
Cementitious Basement Waterproof Coating	
Ingredient	Parts by Weight
Portland cement, type 1	100.0
XO Aggregate	100.0
Flexisperse CA-47	43.0
Defoamer may be added	
Water	to desired consistency
Cementitious Patch and Repair Mortar	
Ingredient	Parts by Weight
Portland cement, Type 1	100.0
Sand	300.0
Flexisperse CA-47	21.0
Defoamer may be added	
Water	to desired consistency
Cementitious Stucco	
Ingredient	Parts by Weight
Portland cement, Type 1	100.0
Georgia marble RH-1	8.0
Sand	350.0
Chopped Glass PPG #600M	1.0
Flexisperse CA-47	22.0
Defoamer may be added	
Water	to desired consistency

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