

# AC60



**Innovative  
Concrete  
Fiber**



## FEATURES

- Enhances performance & durability
- Provides secondary reinforcement
- Eliminates plastic shrinkage cracking up to 100%
- Alkali resistant & non-corrosive
- Insoluble in water
- No fiber protrusion for easy finishing
- High impact resistance
- Excellent bond with concrete paste



## BENEFITS

AC60 fiber added to concrete chemically locks in the fresh concrete matrix, controlling plastic shrinkage. AC60 provides secondary reinforcement which helps eliminate crack formation that causes permanent weakening of the resultant concrete. With AC60, concrete is less permeable, has a smooth surface, is highly impact resistant and improves your Bottom Line.



## APPLICATIONS

AC60's characteristics lend itself to a variety of concrete applications including: slab-on-grade, precast concrete, shot-crete, stucco, decorative and other specialty concrete applications.



## DOSAGE RATES

For general applications such as slab-on-grade, a standard dosage of (1) bag/yd<sup>3</sup> is recommended. Other fibers require higher dosage rates to achieve similar performance. For other applications, consult with your ICF representative for recommended dosages.



## MIXING

Follow ASTM C-94 guidelines. AC 60 can be added directly to the mix at the jobsite or during batching of ingredients, but not as the first ingredient and should be mixed for a minimum of 5 minutes at full mixing speed.

## PACKAGING

1 Carton/32 Bags; 36 Cartons/Pallet; Truckloads are available. Bales are available upon request.

## FINISHING

There is NO surface protrusion when using AC60. AC60 can be pumped or placed using conventional equipment and AC60 can be used with all finishing techniques including power and hand troweling, broom finished and colored concrete.

## PHYSICAL PROPERTIES

Material	Modified Acrylic
Specific Gravity (g/m <sup>3</sup> )	1.17
Elastic Modulus (GPa)	>10.5
Tenacity (MPa)	>650
Decomposition Temperature	330° C / 626° F (AC60 does not melt)
Acid & Alkali Resistance	Excellent
Color	White
Dispersity Rate	Excellent
Filament Diameter (μ)	10-15
Fiber Count (fiber/kg) approx.	794,000,000
Fiber Length (mm)	6 (other lengths available)

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## TESTING

**Introduction:** This document presents the summary of the laboratory testing performed by Elements Material Technology on samples of concrete containing AC60 fiber at an application rate of 0.66 lb/cy (0.39 kg/cm). The scope of the testing was as follows:

Perform laboratory batching of concrete with and without fibers according to Section 4.0 of ICC-ES Acceptance Criteria for Concrete with Synthetic Fibers (AC32-2002) for:

- A. Flexural Strength (ASTM C 78-10)
- B. Bond Strength (ASTM C 234-91)
- C. Impact Resistance Annex E (ICC-ES AC32-03, Annex E)
- D. Plastic Shrinkage Cracking Annex A (ICC-ES AC32, Annex A)



## Summary of Test Results:

The following is a summary of the tests results:

<u>Test</u>	<u>Control</u>	<u>Test-Fibers</u>	<u>% of Control</u>
<b>Flexural</b>	3.96 MPa (575 psi)	4.38 MPa (635psi)	110
<b>Bond Strength</b>	80.17 kN (18,024 psi)s	89.02 kN (20,012 psi)	111
<b>Impact Resistance</b>			
<b>7 days</b>	4 blows	9 blows	225
<b>28 days</b>	8.6 blows	16.6 blows	193
<b>Plastic Shrinkage Cracking</b>	(1)	---	90.4% (1) Average Reduction

(1) 40% difference from the control sample to test sample is the minimum ICC-ES AC32 requirement for reduction of plastic shrinkage.

## Conclusion:

Based on the test results, AC60 fiber, used at a dosage rate of 0.66 lb/yd<sup>3</sup> (0.39 kg/m<sup>3</sup>) exceeded the test parameters required by ICC-ES AC32.

All information, recommendations and advice provided by ICF Concrete regarding AC products and their use and application is based on ICF Concrete's experience with such products when properly stored, handled and applied under normal conditions.

ICF Concrete Additives, LLC reserves the right to change the properties of AC products without prior notice.

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