



## Description

Silikal FM Additive is a densified fumed microsilica pozzolan combined with select water reducing agents and retarders to be used in engineered Portland cement mix designs to increase overall strength, chemical resistance and durability while providing rapid strength development for fast track concrete projects.

Typically used for floor slabs and structural members, machinery bases and pads where high early strength is required.

Properly designed concrete will reach a final set in six to eight hours with an overnight compressive strength of 7,000 psi.

Polymer floor surfacers can be applied as soon as the concrete can be prepared with shot blast equipment, generally within 24 hours.

Low permeability concrete is highly resistant to chloride, sulfate and nitrate penetration. Effects of moisture vapor transmission and subsequent blistering of polymer surfacers are substantially reduced. Alkali-silica reactions are suppressed by addition to typical concrete mix.

On site addition or batch plant addition allows flexibility in delivery and placement.

## Typical Properties

### Compressive strength, psi

1 day.....	7000
7 days.....	8500
28 days.....	10500

### Flexural Strength, psi

28 days.....	1100
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### Splitting Tensile Strength, psi

28 days.....	1100
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Modulus of elasticity	similar to conventional concrete
Creep	less than conventional concrete
Bond	improved internal and external bond strength

## Packaging

- 4 x 25# bags FMA
- 1 x 7# bag FMA-LD

## Mix Design

Portland Cement Type I.....	750 pounds
FM Additive.....	100 pounds
FMA -LD.....	7 pounds
Silica or Granite gravel (ASTM c-33).....	1635 pounds
Concrete silica (ASTM C-33).....	1300 pounds
Water.....	320 pounds

Yield	1 cubic yard
W/C ratio	0.38 includes water in aggregate
Slump	6" to 8" Adjust with type G water reducer

If FMA and FMA-LD is added on site, the initial slump from the batch plant should be 0 to 2 inches. Hot weather may require 85 pounds of ice to replace 85 pounds of water to accommodate transit and facilitate placement.

**Application:** A bonding agent is recommended for all pours and required for pours under 2” thickness. R41 or an epoxy bonding agent can be applied and broadcast with coarse silica sand to cover Poured concrete should be screeded immediately after placement.

**Finishing:** A float finish is recommended to eliminate overworking.

**Curing:** Moist cure with wet blankets or similar techniques for 12 to 72 hours depending on temperature and thickness of pour. Subsequent Surfacer can be applied once the concrete has developed sufficient strength to be prepared by shot blast equipment.



**WARNING:** This product consists of amorphous silica dioxide and sulfonated naphthalene condensate NA salt. May cause irritation of skin, eyes and respiratory tract. Avoid inhalation of dust. Wear protective gloves, dust mask and eye protection.

Silikal America warrants this product to conform to its manufacturing standards and to be free of manufacturing defects. Buyer’s sole remedy shall be limited to the refund of purchase price or replacement of product proved defective, exclusive of labor. No other warranties express or implied shall apply including any warranty of merchantability or fitness for a particular purpose. It is the buyer’s responsibility to satisfy itself of the suitability of the product for a particular purpose.