



E5X^{25/50}



Expanded joint system utilizing a three dimensional concrete reinforcement technology. Eliminate wet curing and curing compounds to decrease construction timeline.



Cure



Strength



Shrinkage



Flatness



Primary Applications

Structural Walls & Precast

Structural Foundations

Columns

Infrastructure

Interior slab on grade and slab on metal decks

Topping Slabs

Paving

Rebar Replacement

Features & Benefits

Internal Curing controls the water of convenience to cure efficiently.

Eliminates wet curing and topical curing compounds.

Increase finish-ability and workability.

Low humidity, high winds, direct sunlight will not affect the surface from drying or cause differential drying.

Reduces drying shrinkage and curling.

Extends joints to 25' or 50' depending on mix.

Increase shear strength, durability and ductility.

Electroplated Zinc Steel Fibers resist corrosion.

RCS™ Technology

E5™ RCS products employ patent-pending silicate free Reactive Co-polymerizing Solids to transform Ordinary Portland Cement Concrete (OPCC) at the nano-scale level to improve performance, function and longevity.

LEED Benefits

ElementFive products are environmentally conscious solutions. Complete your slab knowing our products pose no risk to crew members or the environment. A benefit on jobs with LEED requirements.

Description

Combining E5 Internal Cure with E5 X steel twisted fibers provides the efficiency of curing with the strength of micro-rebar. E5 Internal Cure increases cement hydration from the ready-mix location to the job site through placement. The unique, twisted steel fibers design allows for efficient tensile stress re-distribution within the concrete. The result is a significant increase in the concrete's strain capacity and pre-crack properties. Unlike rebar and other forms of reinforcement, E5 X steel twisted fibers provides proactive reinforcement which engages the concrete before large cracks form.

Approvals

Uniform ES Evaluation Report 0279

Dimensions

Length: 25mm (1.00 in)

Diameter: 0.50 mm (0.02 in)

Weight: 25,300 fibers/kg (11,500 fibers/lb)

Tensile Strength

246.5 ksi minimum (1700 Mpa minimum)

Coating:

Electroplated Zinc

Meets Specifications

ACI 318

ACI 360

ASTM A820-Type 1



ELEMENTFIVE
THE COMPLETE CONCRETE SLAB SYSTEM

Review technical data sheets for proper product application and use. Please contact the E5 X Technical Service Department at 1-888-881-1726 for assistance.

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www.SpecificationProducts.com



Dosing Instructions:

E5 Internal Cure Admix

For all concrete applications, recommended dosage is 4 fl. oz. per 100 lbs. of cementitious material. Consult E5 Internal Cure Tech Data Sheet for more information.

E5 X Steel Twisted Fibers

Mixing should be done in accordance with ASTM C94 and the mixing instructions below. The dosages of E5 X added to the mix should be noted on the batch documentation in accordance with Uniform Evaluation Service ER 279 Section 5.15. and verified using the procedure in ER 279 Appendix A.

Typical dosing of slabs 4-7" thick is 9 pounds for 25' joint spacing and 22 pounds for 50' spacing.

E5 X Mixing Instructions:

Ready Mix Plants (Dry) - TRUCK MIXER

To prevent E5 X from clumping (small cluster of E5 X), follow the procedures below: (1) Add all E5 X to the truck drum. Typically this is done by hand, dumping the entire contents of the box into the drum while it is at idle speed. If available, this is done from a slump check stand. (2) Drive the truck into plant. (3) Once truck is in position under the chute, increase the drum to full charging speed and add a minimum of 50% of the batch water to the truck (more than 50% is OK). (4) Allow the E5 X and water to mix for no less than 45 seconds while delaying the addition of the remaining materials. NOTE: Once the water and E5 X are in the drum and the drum is at charging speed, the drum speed shall NOT decrease until all batching is complete. (5). Add aggregate, sand, cement and remaining water to truck and mix in normal matter (60 revolutions minimum).

Ready Mix Wet (Central Mix)

(1) For dosages below 15 lb/cyd (9kg/m³) follow dry procedures with 7 gallons (27 liters) of water in the drum (instead of the 50% requirement). NOTE: Once the water and E5 X are in the drum and the drum is at charging speed, the drum speed shall NOT decrease until all batching is complete. (2) For higher dosage please use the Site Batching instructions below.

Site Batching Into Mix Trucks (Loaded Truck at Construction Site)

(1) Set the drum to charging speed. (2) Sift E5 X through a 2"x 2" (50mm x 50mm) Mesh or use E5 X Dosing Unit (contact E5 X to order). The dosing unit breaks up clumps and ensures E5 X goes into the truck at a controlled rate (about 1 box per minute). When E5 X is added at this stage, it must enter the mixer clump free.(3) When adding E5 X, it may collect on any residual concrete on the interior surfaces of the hopper. Push the E5 X into the drum avoiding clumps. Adding a slipper y lining, such as PVC sheeting, to the hopper may help avoid these buildups. (4) Mix at charging speed for 5 minutes (60 revolutions) after E5 X is added.



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