

## Product: Helix 5-25

### Description:

The unique, twisted design of Helix allows for efficient tensile stress re-distribution within the concrete prior to concrete cracking. The result is a significant increase in the concrete's strain capacity and pre-crack properties. Unlike rebar and other forms of reinforcement, Helix provides proactive reinforcement which engages the concrete before large cracks form.

### Applications:

- Structural Walls
- Structural Floors
- Foundations
- Beams/Columns
- Shotcrete
- Paving
- Precast
- Rebar Replacement

### Approvals:

**Uniform ES Evaluation Report 0279**

[www.helixsteel.com/technical](http://www.helixsteel.com/technical)

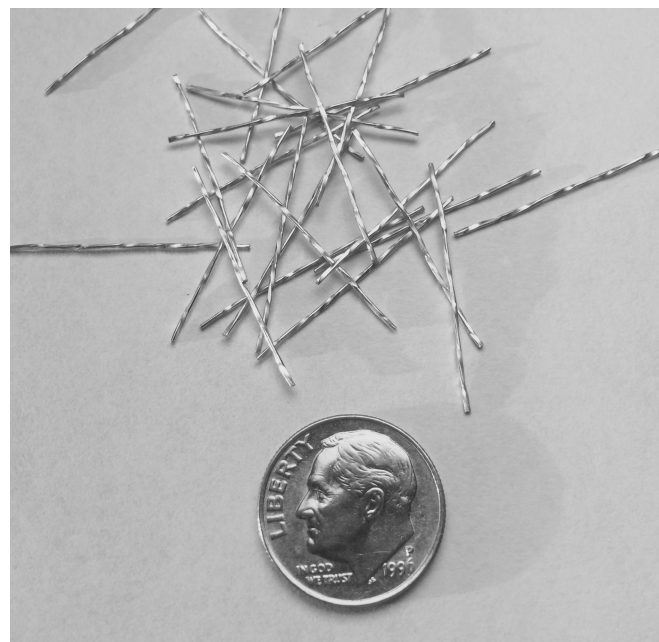
[www.iapmoes.org](http://www.iapmoes.org)

### Meets Specifications:

ACI 318

ACI 360

ASTM A820-Type I



### Geometry:

Length: 25 mm (1.00 in)

Diameter: 0.50 mm (0.02 in)

25,307 fibers/kg (11,500 fibers/lb)

### Tensile Strength:

Tensile Strength: 246.5 ksi minimum

(1700 Mpa minimum)

Material: High Carbon Steel Wire

### Coating:

Coating: Electroplated Zinc

For more information, visit **[www.helixsteel.com](http://www.helixsteel.com)** or call 734-322-2114.

Helix Steel - 2300 Washtenaw Ave, Suite 201, Ann Arbor, MI 48104



Made in USA

### Dosing Instructions:

Mixing should be done in accordance with ASTM C94 and the mixing instructions below. The dosages of Helix 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.

### Mixing Instructions:

#### Ready Mix Plants (Dry) - TRUCK MIXER

To prevent Helix from clumping (small cluster of Helix), follow the procedures below: (1) Add all Helix 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 Helix and water to mix for no less than 45 seconds while delaying the addition of the remaining materials. **NOTE:** Once the water and Helix 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/m<sup>3</sup>) follow dry procedures with 7 gallons (27 liters) of water in the drum (instead of the 50% requirement). **NOTE:** Once the water and Helix 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 Helix through a 2"x 2" (50mm x 50mm) Mesh or use Helix Dosing Unit (contact Helix to order). The dosing unit breaks up clumps and ensures Helix goes into the truck at a controlled rate (about 1 box per minute). When Helix is added at this stage, it must enter the mixer clump free. (3) When adding Helix, it may collect on any residual concrete on the interior surfaces of the hopper. Push the Helix into the drum avoiding clumps. Adding a slippery lining, such as PVC sheeting, to the hopper may help avoid these buildups. (4) Mix at charging speed for 5 minutes (60 revolutions) after Helix is added.

#### Pan Mixer/Drum Mixer

(1) Set the mixer to the proper speed. (2) Add Helix at a rate of 45-60 seconds per 45 lbs (20 kgs). (3) Helix should be added with the aggregates. (4) Mix at max speed for 5 minutes after Helix is added.

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