03 05 01 – MATERIALS FOR CONCRETE

Helix Steel – Twisted Steel Micro Rebar™ (TSMR™) Reinforcement Specification Guide

The following specification guide has been prepared to assist design professionals in the preparation of a specification section that includes Twisted Steel Micro Rebar™ (TSMR™) reinforcement by Helix Steel. Utilize these paragraphs to insert text into specification Section 03 30 00 – Cast-in-Place Concrete or other applicable sections where concrete reinforcing steel will be utilized.

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The following should be noted in using this specification guide:

Hypertext links to manufacturer websites are included after manufacturer names to assist in product selection and further research. Hypertext links are shown in blue text.

Optional text requiring a selection by the user is enclosed within brackets and shown in red text, e.g.: “Color: [Red.] [Black.]"

For assistance on the use of the products in this section, contact Helix Steel by calling 734-322-2144 or visit their website at [www.helixsteel.com](http://www.helixsteel.com).

PART 1 - GENERAL

SUBMITTALS

 A. Submittals for Review:

 1. Product Data: Twisted Steel Micro Rebar (TSMR) reinforcement manufacturer’s standard product description and dosage and mixing instructions.

 B. Informational Submittals:

 1. Test Reports: Uniform Evaluation Service (UES) certified test results for Twisted Steel Micro Rebar (TSMR) reinforcement.

 2. Batch Tickets: When Twisted Steel Micro Rebar (TSMR) reinforcement is added at a ready-mix plant, furnish batch tickets indicating:

 a. Information required by ASTM C94.

b. Type and amount of Twisted Steel Micro Rebar (TSMR) reinforcement added to concrete mix.

DELIVERY, STORAGE AND HANDLING

1. Store Twisted Steel Micro Rebar (TSMR) reinforcement in protected, dry location until used; prevent contamination by other materials.

PART 2 - PRODUCTS

MATERIALS

1. Twisted Steel Micro Rebar (TSMR) Reinforcement:
2. Source: Helix 5-25 by Helix Steel ([www.helixsteel.com](http://www.helixsteel.com)) [or approved substitute].
3. Description: High-carbon, galvanized, cold-drawn steel wire conforming to ASTM A820, Type 1, continuously twisted about its axis, free from surface contaminants.
4. Tensile strength: 268.3 KSI (1850 MPa).
5. Galvanized coating thickness: Minimum 3 grams per square meter.

 5. Length: 1.0 inch (25 mm).

 6. Equivalent diameter: Maximum 0.02 inch (0.50 mm).

MIXES

1. Twisted Steel Micro Rebar (TSMR) Reinforcement:
2. Add to concrete mix in accordance with ASTM C1116.
3. Dosage rate: [As indicated on Drawings.] [In accordance with manufacturer’s instructions.]

PART 3 - EXECUTION

INSTALLATION

Retain the following when TSMR is used in slab construction.

 A. Do not disturb surface paste covering Twisted Steel Micro Rebar (TSMR) reinforcement during finish operations.