

# SUBMITTAL SHEET

## Nitroset Ceiling Clip Assemblies and Pre-Tied Wire



ICC Evaluation Service, Inc.

- ESR-3371
- Lab testing by Element Materials Technology, an IAS accredited testing lab.

### Pins and Clip Assemblies Descriptions

#### Fastener Specifications:

The Nitroset pins are manufactured from carbon steel complying with ASTM A510 Grade 1060 or 1062 or equivalent. The fasteners are heat-treated to a Rockwell C hardness of 50-54. Fasteners are mechanically zinc-plated to a minimum thickness of 0.0003 inch (0.008 mm) in accordance to ASTM B633.

### Performance Stats

PRODUCT DESIGNATION	EMBEMENT DEPTH (inches)	ALLOWABLE LOADS (lbf)					
		4000 psi			6000 psi		
Concrete Compressive Strength:		Tension	Shear	45-Degree	Tension	Shear	45-Degree
CLU222	Controlled by clip thickness	120	165	120	115	276	209
CLAS525		158	242	151	163	184	168
CLAS532		150	147	213	171	146	152

PRODUCT DESIGNATION	MINIMUM EMBEDMENT DEPTH (inch)	ALLOWABLE LOADS (lbf)					
		Installed through Lower Flute of 3-inch Deep Steel Deck Panel (W-deck) into Concrete		Minimum Required Concrete Topping Thickness Above Deck Panel (inches)	Installed through Lower Flute of 1½-inch Deep Steel Deck Panel (B-deck) into Concrete		Minimum Required Concrete Topping Thickness Above Deck Panel (inches)
Fastener Location:		Tension	Shear		Tension	Shear	
Load Direction:							
CLU222	Controlled by clip thickness	45	180	3½	100	230	5
CLA525		90	280		110	330	
CLA532		140	315		170	355	

**Notes:**

1. Data in accordance with the ICC-ES Acceptance Criteria for Power-actuated Fasteners Driven into Concrete, Steel and Masonry Elements (AC70). A minimum 5:1 safety factor was used to calculate allowable load based on AC70 guidelines.
2. Testing and calculations performed in accordance to ASTM E1190 requirements.
3. Testing performed by Element Materials Technology in St. Paul, MN 55114
4. For SI: 1 inch = 25.4 mm; 1 lbf = 4.45 N; 1 psi = 6895 Pa.
5. Concrete thickness at the point of penetration must be a minimum of three times the embedment depth.

## 12 Gauge Hanger Wire Specifications

Wire Diameter (in)	Allowable Tensile Strength* (lbs)	Ultimate Tensile Strength (lbs)
0.1024	145	436

\*A minimum 3:1 safety factor was used to calculate allowable tensile strength.

PART NUMBER	DESCRIPTION	PACK SIZE
<b>Nitroset PRE-TIED with 1-1/4" STEP SHANK PIN &amp; CLIP</b>		<b>Bundle of</b>
WIL12-4N-532	4' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-6-532	6' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-8-532	8' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-10-532	10' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-12-532	12' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-14-532	14' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-16-532	16' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-18-532	18' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
WIL12-20-532	20' x 12G Pre-tie w/ Nitroset 1-1/4" Step Shank Pin & Clip	100 pcs.
<b>Nitroset PRE-TIED with 1" STEP SHANK PIN &amp; CLIP</b>		<b>Bundle of</b>
WIL12-4N-525	4' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-6-525	6' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-8-525	8' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-10-525	10' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-12-525	12' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-14-525	14' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-16-525	16' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-18-525	18' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
WIL12-20-525	20' x 12G Pre-tie w/ Nitroset 1" Step Shank Pin & Clip	100 pcs.
<b>Nitroset PRE-TIED with 7/8" x 0.125 Pin &amp; Clip Assembly</b>		<b>Bundle of</b>
WIL12-4N-CLU222	4' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip Assembly	100 pcs.
WIL12-6-CLU222	6' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip Assembly	100 pcs.
WIL12-8-CLU222	8' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip Assembly	100 pcs.
WIL12-10-CLU222	10' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.
WIL12-12-CLU222	12' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.
WIL12-14-CLU222	14' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.
WIL12-16-CLU222	16' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.
WIL12-18-CLU222	18' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.
WIL12-20-CLU222	20' x 12G Pre-tie w/ Nitroset 7/8" x 0.125 Pin & Clip	100 pcs.

1. Nitroset pre-tied wires meet or exceed ASTM A 641/A 641M, Class 1 zinc coating (85g/m<sup>2</sup>) for wires ranging from 2.30 to 3.20 mm in diameter.
2. All wires feature a hot dip galvanized zinc coating.

# Submittal Approval Form

Contract/Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Contractor:	Date: