



Product Evaluation Report

PER-18114

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Progressive Engineering Inc.

Initial Listing
April, 2018

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58640 State Road 15
Goshen, Indiana 46528

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Listed Product

Hex Lag 5/16" - 9 x 3" Spin Lock

Listed For

Shelter Products Inc.

4215 State Highway 13 North
Haleyville, AL 35565

Progressive Engineering Inc. is an accredited Testing Laboratory and Third Party Quality Control Agency. This **Product Listing Agreement** represents a product that *Pei* has a follow-up testing program with. This **Product Listing Agreement** in no way implies warranty for this product or relieves **Shelter Products Inc.** of their liabilities for this product. *Pei* is accredited to ISO Standard 17020 and 17025. This **PER** is an official document if it is within one year of the initial or renewal date.

Product Manufacturing

The 5/16" Hex Lag fasteners are manufactured by independent companies. Any company manufacturing product for Shelter Products, Inc. that is intended to be listed by this **PER**, has an agreement between the manufacturer and Shelter Products, Inc.

Listing Details

The 5/16" X 3" lg. Hex Lag fully threaded fasteners are used primarily in the HUD and Modular Housing for connecting the steel frame to wood floor joists. This Evaluation Report is considering the bending strength and chemical composition of the lag screws only.

Product Description

The **Hex Lag** Fasteners are manufactured from SAE C1022 grade steel, heat treated to a Rockwell C hardness between 28 - 38 for the core and a surface hardness minimum of HV 450. The Hex Lag has a minimum bending yield strength of 150,000 psi. The screws are manufactured with a nominal outside diameter of .291" and a nominal head diameter of .624". The Hex Lag has a fully threaded shank and is identified by a raised dot on the head.

Tested to

ASTM F1575-03 (2008) Standard Test Method for Determining Bending Yield Moment of Nails.

Product Documentation

A Quality Control Manual from each Approved Manufacturer

An agreement between **Shelter Products Inc.** & each Approved Manufacturer is required

A Product Listing Agreement between *Pei* and **Shelter Products Inc.**

A test report for ASTM F1575-03 Bending Yield Strength dated November 2016.

Product Labeling

Each Box of fasteners shipped, that are covered by this **PER**, must have a label attached with at least the following information:

1. **Shelter Products Inc.** name, address or website.
2. Fastener Designation
3. Purchase Order and / or Lot Number
4. This **PER** number and *Pei's* Logo

Acceptable Listing Marks



Fastener Identification



Fully Threaded



24 Locking Serration



Hex Head

Fastener Specifications

Fastener Part Number	Overall Diameter / Length	Major Diameter	Head Diameter	Tip Length	Min. Bending Yield Strength (psi)
F19267	5/16" x 3"	.291" - .314"	.624" - .675"	.275"	150,000