Evaluation Service®

AER-17109

Pei **Evaluation Service** is an accredited **ISO Standard 17065** Product Certifier, accredited by the IAS. This **Assembly Evaluation Report** represents an assembly that *Pei* **ES** has Evaluated. This **Assembly Evaluation Report** in no way implies warranty for this product or relieves **Marino\Ware** of their liabilities for this product. This **AER** is an official document if it is within one year of the Initial or Re-Approval date.

Initial Approval November, 2017 **Re-Approved**

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Report Owner

Ware Industries, d/b/a Marino\WARE
400 Metuchen Road
South Plainfield, NJ 07080

Product

Viper20 Stud (For Use With Impact Resistant Assemblies)

Evaluation Report Information

Marino\WARE Contact Information:
1-800-627-4661 or **www.marinoware.com/contact-us**

General Details

Marino\WARE Viper20 Stud has been tested and evaluated in accordance with the requirements of the building codes and standards listed under the Code & Standard Compliance section of this **AER**. Marino\WARE has an Assembly Evaluation Agreement with *Pei* **Evaluation Service** (*Pei* **ES**). This Assembly Evaluation Report is based on the Steel Stud and the Gypsum sheathings mentioned are under a current ISO Standard 17065 Product Certification.

Assembly Parts Description

Steel Studs:

The **Marino\WARE Viper20 Stud** is a cold-formed steel stud manufactured with a knurled flange and ViperRib™ technology. A minimum yield strength of 70 ksi and a cross-sectional shape of 1-1/4" x 3-5/8" with a minimum thickness of 0.0181" is required. The **Viper20 Studs** were Galvanized coated and were labeled by an ISO 17065 Product Certifier.

Impact Side Sheathing:

5/8" thick Impact labeled Panels attached with screws as specified in ASTM C840. See Table 1. for brand names.

Non-Impact Side Sheathing:

5/8" Type X Gypsum Panel attached with screws as specified in ASTM C840.

Assembly Evaluated for

1. **Viper20 Studs** have been tested and evaluated for use with Soft Body Impact resistant assemblies only. Impact resistant gypsum board fastened according to ASTM C840 and approved for use with Viper20 Studs are described in Table 1.

General Limitations

1. This AER does not represent an ISO 17065 Certification for either the studs or sheathing by themselves but only the assembly.
2. If changes are made to the sheathing or steel studs by the manufacturer or Product Certifier, it may be necessary to re-Evaluate this assembly. Because PEI-ES does not provide the Product Certification for the stud or sheathing, PEI-ES would be unaware of any changes to these products.

Code & Standard Compliance

2012 & 2015 International Building Code

Section 403.2.3.1

Meets the requirements of ASTM C1629 for Soft Body Impact when used in walls constructed with the gypsum boards and fasteners shown in Table 1 of this **PER**.

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Table 1 - Approved ASTM C1629 Soft Body Impact Assemblies Using Viper20 Studs

Impact Side Gypsum Panel	Fastener		Stud Spacing	Soft Body Impact Level
	Type	Spacing		
USG Sheetrock® Brand Mold Tough® VHI Firecode® X Panels	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
GP DensArmor Plus® Impact-Resistant Interior Panels	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
CertainTeed Extreme Impact Resistant Gypsum Board with M2Tech®	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
National Gold Bond® Brand Hi-Impact® XP® Gypsum Board	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
American M-Bloc® IR Type X Interior Gypsum Panels	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
PABCO® High Impact Type X Gypsum Panels with MOLD CURB® Plus Technology	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**
Continental Protecta® HIR 300 Type X with Mold Defense®	#6x1-1/4" type S drywall screw	16" o.c.	16" o.c.	**3**

Acceptable Evaluation Marks

1. An approved PEI-ES Assembly is not required to be labeled.
2. An approved PEI-ES Assembly is not required to have a Follow-up Inspection Service.
3. The Steel Studs and Sheathing as shown in Table 1. should have the appropriate Evaluation Report markings.

Assembly Documentation

1. An Assembly Evaluation Service Agreement between Pei Evaluation Service and Marino\WARE
2. *ASTM C1629 Soft Body Impact Tests, Dated 11/3/2017*
3. Opinion letter from a Professional Engineer, dated 11/28/2017

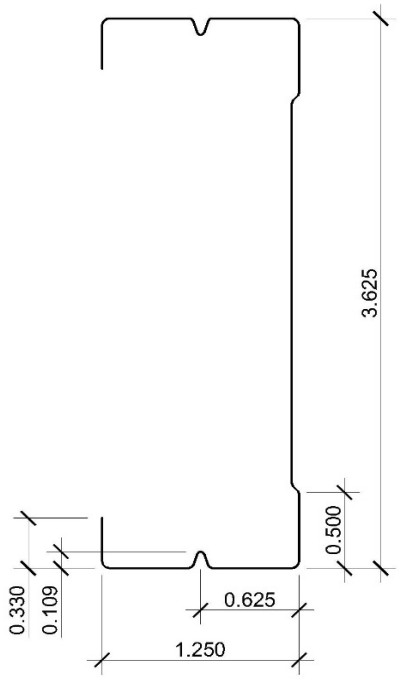

Figure No. 1