

Pei Evaluation Service® is an accredited ISO Standard 17065 Product Certifier, accredited by the IAS. This **Product Evaluation Report** represents a product that **Pei ES** has Evaluated. This product has a Product Evaluation Service Agreement & Follow-up Inspection Service Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **ITW Polymers Sealants North America, Inc.** of their liabilities for this product. This **PER** is an official document if it is within one year of the initial or re-approval date.

Initial Approval
August, 1998

Re-Approved
August, 2018

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Report Owner

ITW Polymers Sealants North America, Inc.
111 S. Nursery Road
Irving, TX 75060

Approved Manufacturing Location

ITW Polymers Sealants North America, Inc.
56 Air Station Industrial Park
Rockland, MA 02370

Product

Miracle® Foamseal® F6400-LVR One-Part
Polyurethane Structural Adhesive

For Evaluation Report Questions

www.itwsealants.com
Contact: Martha Mittelstaedt - 781-681-0450

General Details

The **Miracle Foamseal F6400-LVR** One-Part Polyurethane Structural Adhesive is used to bond wood, gypsum board and plywood by applying adhesive beads between these materials and using mechanical fasteners. The approved manufacturing location shown above has an approved Quality Control Manual to manufacture the **Miracle Foamseal F6400-LVR** adhesive and is inspected quarterly by *Progressive Engineering Inc. (Pei)*.

Product Description

The **Miracle Foamseal F6400-LVR** is a one-part, moisture cured polyurethane adhesive meant to be used in an indoor manufacturing facility. If used in an outdoor environment, Section "General Product Use and Limitations" must be followed.

Containers and Storage

F6400-LVR is shipped in disposable intermediate bulk containers such as totes. Storage of these containers should be in an indoor dry place greater than 50°F. For shipments that have been exposed to cold temperatures, holding for a short time at 90°F to 120°F while agitating until the liquid temperature has been raised to greater than or equal to 50°F is sufficient to lower the viscosity to tractable levels. Unopened containers will have a storage life of up to six months in these conditions.

General Product Use and Limitations

F6400-LVR is to be applied in temperature conditions greater than 50°F and shall remain in those conditions for a minimum of 24 hours. All substrate surfaces should be dry and be above 50°F or the curing time of the adhesive might be affected. All surfaces must be free of grease, oil, mold release agents, gypsum powder and any loose particles such as dirt, sawdust and woodchips. The maximum open time for F6400-LVR is 15 minutes. F6400-LVR is applied using 1/16" to 1/8" wide continuous beads by using a squeeze bottle or pressurized dispensing equipment. Construction of assemblies using F6400-LVR and their design values shall be in accordance with the test reports described by this **PER**.

- The **F6400-LVR** adhesive shall be installed according to **ITW POLYMERS SEALANTS** Application Instructions. A copy of these instructions must be made easily available at the assembly areas.
- If **F6400-LVR** is used in an outdoor environment, the temperature conditions, as stated in section "General Product Use and Limitations", will still need to be met.
- The **F6400-LVR** adhesive is to be manufactured at the **ITW POLYMERS SEALANTS** plant in Rockland, MA following their approved Quality Control Program, with inspections by *Progressive Engineering Inc.*
- The use of **F6400-LVR** adhesive in a fire rated assembly is not addressed in this **PER**.

Code Compliance

2009 / 2012 / 2015 International Residential Code	2009 / 2012 / 2015 International Building Code
Section R104.11	Section 104.11

Test Standards

- Pei 93-7 Standard** - Performance Requirements for Fastening Gypsum Board to Wood Framing using a Urethane Adhesive
- California CA 25-4** - Standard for the Evaluation of Adhesives for Structural use in Multi-Unit Manufactured Housing and Commercial Coach Construction
- ASTM E72** - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
- ASTM C557** - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing
- ASTM D3498** - Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems
- ASTM D6464** - Standard Specification for Expandable Foam Adhesives for Fastening Gypsum Wallboard to Wood Framing
- AFG-01** - Standard Specification for Adhesives for Field-Gluing Plywood to Wood Framing

Table 1 - Categorized list of test reports for F6400-LVR Adhesive¹

Wall Racking Tests ²			ASTM C557
1997-1388A	1997-2080E	2003-0949A	2000-1240
1997-1388B	1997-2080F	2003-0949B	1997-1800
1997-1388C	1998-1898	2003-0949C	CA 25-4
1997-1388D	1998-2308A	2003-0949D	1997-1610
1997-1388E	1998-2308B	2003-0949E	2005-1718
1997-1636	1998-2308C	2003-0949F	AFG-01
1997-2080A	1998-2744A	2006-1322	2000-1416
1997-2080B	1998-2744B	2012-1569AC	ASTM D3498
1997-2080C	1998-2744C	2012-1569D	2000-1518
1997-2080D	2003-0677	2012-1569T	ASTM D6464
			2002-1692

Notes:

1. Bead sizes are described in each test report
2. Tested in accordance to ASTM E72 - Static Wall Racking Tests

Product Documentation

- A Product Evaluation Service Agreement between **Pei Evaluation Service®** and **ITW Polymers Sealants North America, Inc.**
- A Follow-up Inspection Service Agreement between **Progressive Engineering Inc.** and **ITW Polymers Sealants North America, Inc.**
- ITW POLYMERS SEALANTS** Quality Control Manual - Dated: 1/20/2017
- F6400-LVR Adhesive Series** - Guidelines for Use, Application, & Safe Handling - Dated: 2/2016
- Miracle Foamseal F6400-LVR** - Guide Specifications - Dated: 8/2017
- Miracle Foamseal F6400-LVR** - Technical Data Sheet - Dated: 1/2017
- A SDS sheet Dated: 11/28/2017
- Letters - Dated: 9/29/1998, 12/2/2009, and 8/22/2017

Product Labeling

Each container shipped of **F6400-LVR** that is covered by this **Product Evaluation Report (PER)** must have a label attached with at least the following information:

1. **ITW POLYMERS SEALANTS** Name & Address
2. Date of Manufacture
3. Shelf Life Information
4. This **PER** Number & **Pei ES** Logo
5. Component Name

Acceptable Evaluation Marks



Product Pictures



Figure 1 - Single Bead Application Head

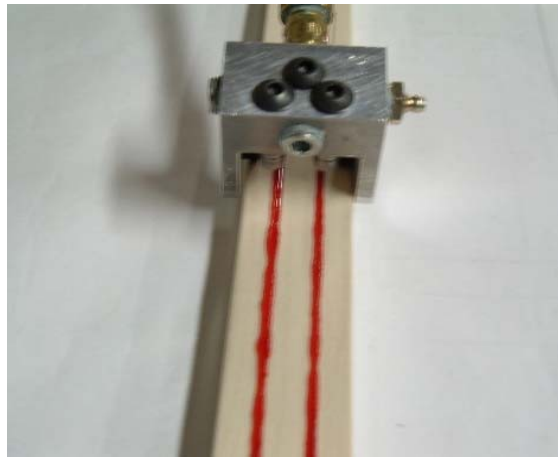


Figure 2 - Dual Bead Application Head



Figure 3 - F6400-LVR - 55 Gallon Drum



Figure 4 - F6400-LVR - 275 Gallon Tote



Figure 5 - Miracle Foamseal F6400-LVR Product Label