



Product Evaluation Report

PER-08027

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Initial Listing
April, 2008

Re-Approved
January, 2018

58640 State Road 15
Goshen, Indiana 46528

574-533-0337
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Listed Product

Various Composite Wood Products

Listed For

Genesis Products Inc.

2608 Almac Court
Elkhart, IN 46514

Approved Laminator / Distributor

Genesis Products Inc.

2608 Almac Court
Elkhart, IN 46514

Progressive Engineering Inc. is an accredited Testing Laboratory and Third Party Quality Control Agency. This **Product Evaluation Report** represents a product that *Pei* has a Follow-up Service Agreement with. This **Product Evaluation Report** in no way implies warranty for this product or relieves **Genesis 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 re-approval date.

Listing Details

The **Various Wood Products** covered under this Listing are used for laminated paneling, wrapped materials, interior passage doors and hardwood and laminated cabinets which are supplied to the Manufactured Housing, RV and Park Model markets.

The Various Wood Products have been tested and evaluated for ASTM E84 Flame Spread and Formaldehyde Emissions per HUD 24 CFR Part 3280.308 for plywood and particleboard. Along with this Listing is an ongoing quarterly Quality Assurance, Testing, and Inspection Program of **Genesis Products Inc.** Quality Assurance Documentation.

Hardwood Plywood (Meranti/Lauan) consists of layers of wood veneer that are stacked together usually oriented with the grains running at the right angle, having been bonded together using an adhesive with the assistance of heat and pressure. There is usually an odd number of plies as the symmetry makes the board less prone to warping. Plywood is a composite material. This product is purchased from a supplier.

Medium Density Fiberboard (MDF) is an engineered wood product that is formed by breaking down softwood into wood fibers' and then combining it with wax and resin binding it together using heat and pressure. This product is denser than normal particle board. This product is purchased from a supplier.

Particleboard is an engineered wood product that is manufactured from wood particles such as wood chips, sawmill shavings or saw dust that is pressed or bound together with a synthetic resin. This product is purchased from a supplier.

Genply is a recycled wood product that is composed of wood based composite panel produced from domestic softwood and sawmill waste. Genply is smooth on both sides and has a consistent color. This "engineered wood" has no core voids or gaps, is flexible and has either met or exceeded industry standards for Lauan paneling. This product is manufactured by **Genesis Products Inc.** and is currently used in many RV applications.

Laminated Products

The previously mentioned Substrates are laminated by **Genesis Products Inc.** with embossed vinyl, papers and decorative, or wood veneers to alter the appearance of the Substrate. The lamination process uses only tested and approved adhesives and laminates. The lamination process follows an approved Quality Control Program.

Code Compliance

ANSI A119.2/NFPA 1192 Standard
on Recreational Vehicles

HUD 24 CFR Part 3280.308
HUD 24 CFR Part 3280.406

ANSI A119.5 Recreational Park
Trailers

ASTM E 84 Rating = 200 or less

FMVSS 302 Flame Spread Rating

Formaldehyde Emissions Level = .2 ppm or less for Hardwood Plywood and .3ppm or less for Particleboard.

CARB Phase 2 Formaldehyde Emissions Level = .05 ppm or less for Hardwood Plywood (CC) and .09ppm or less for Particleboard.

Product Labeling

All the Various Wood Products that are to be covered by this **PER** must be labeled with at least the following information:

1. The ASTM E84 / FMVSS 302 Flame Spread Rating
2. The thickness of the substrate
3. The Mill Identification Number / Name
4. This **PER** number & *Pei* name or Logo
5. The Formaldehyde Emissions Level per HUD

Acceptable Listing Marks



Listed Products

The following Products in **Table 1** meet the requirements set forth by RVIA and HUD for Formaldehyde levels under .2 ppm for Meranti and .3 ppm for Particleboard.

Table 1 - Listed Products

Description	Thickness	Overlay / Finish	Adhesive
Hardwood Plywood	2.7mm	4 Mil Vinyl	✓
	3.6 mm	4 Mil Vinyl	✓
Particleboard	1/4"	45-60GM Paper	✓
		4 Mil Vinyl	✓
	1/2"	4 Mil Vinyl	✓

The following Products in **Table 2** meet the Flame Spread requirements of 200 or less as tested per ASTM E84:

Table 2 - Listed Products (As of January, 2017)

Description	Thickness	Overlay	Glue
Natural Birch	.5"	RAW	N/A
Chinese Birch	9MM	Raw	Raw
	9MM	30gm Paper	PA116b
Meranti	2MM	2-4 Mil Vinyl	PA 290
Meranti	3.4MM	Proto Film	Unknown
ILW	3.0MM	Lakeside Cherry	Unknown
ILW	3.0MM	4 Mil	Unknown
ILW (Poplar)	3.0MM	RAW	N/A
MDF (HD)	3.0MM	2-4 Mil Vinyl	PA 290
MDF	1-3/8"	Paint, Top Coat & Glazed	—
Particleboard	1/4"	Raw	N/A
Particleboard	1/4"	30gm Paper	PA-116
Particleboard	5/8"	1/8" Helix	Unknown
PVC	.170"	Raw	N/A
Plywood	.5"	30gm Paper	PA116b
HWPW-VC	18MM	RAW	N/A
HWPW-VC	18MM	30gm Paper	PA116b
Imported PVC	3.0MM	2-4 Mil Vinyl	White
Domestic PVC	3.0MM	2-4 Mil Vinyl	White
Domestic ABS	1.5MM	2-4 Mil Vinyl	White
EPS Paperbacked	5.0MM	2-4 Mil Vinyl	White
Superlite VGX	1/4"	2-4 Mil Vinyl	White

The following Products in **Table 3** meet the Flame Spread requirements for a Burn Rate of LESS than 4" per minute as tested per FMVSS 302:

Table 3 - Listed Products (As of May, 2017)

Description	Substrate Thickness	Overlay	Glue
Cedar	3.6mm	Raw	Raw
FJP	.5"	30-60gm Paper	Yes
	1/8"	4-6 Mil Vinyl	Yes
HWPW-VC	15MM	30-60gm Paper	Yes
ILW	3.0 - 12.0MM	30-60gm Paper	High Solids
	3.0 - 12.0MM	30-60gm Paper	Vinyl Glue
	3.0 - 12.0MM	12 Mil Vinyl Membrane	Glue / Hardner
	15MM	60 Gram Paper	Hot Melt
Lauan (Meranti)	2.7 to 18mm Meranti	Raw	N/A
	2.7 to 18mm Meranti	4 - 6 Mil Vinyl	Yes
	2.7 to 18mm Meranti	30 - 60gm Paper	Yes
	2.7 to 18mm Meranti	12 Mil Vinyl Membrane	Glue / Hardner
MDF	1/8" - 1"	Raw	Raw
		30 - 50gm Paper	Yes
		30 - 60gm Paper	Hotmelt
		4-6 Mil Vinyl	Yes
		12 Mil Vinyl	Yes
		4-6 Mil Vinyl	Hot Melt
		12 Mil Vinyl Membrane	Glue / Hardner
Particleboard	1/4"	Raw	Raw
		30-50gm Paper	Yes
Plastic	.064"	60 Gram Paper	Door Glue
		60 Gram Paper	Hot Melt
Plyfelt	3.0mm	4-6 Mil Vinyl	Hot Melt
Plywood	1/2"	Raw	N/A
	1/2"	30-50gm Paper	Yes
	1/2"	4-6 Mil Vinyl	Yes
U-Channel	5/8"	4-6 Mil Vinyl	Yes
Unicore	.105"	Raw	N/A
		6 Mil Vinyl	Yes
Uniply	.116"	30-60gm Paper	Yes
		4-6 Mil Vinyl	Yes

Quality Assurance Documentation

A Follow-up Listing & Inspection Agreement between *Progressive Engineering Inc. (Pei)* and *Genesis Products Inc.*

All testing documentation is kept on file at *Genesis Products Inc.* facility in Elkhart, Indiana and at *Pei*

A *Genesis Products Inc.* Quality Assurance Manual for the Sheet Good Laminating - Dated: January, 2018

Test Report FH-1930 for Surface Burning Characteristics of Building Materials per ASTM E84-08 - Dated: April 30, 2009

Test Report FH-1939 for Surface Burning Characteristics of Building Materials per ASTM E84-08 - Dated: May 12, 2009

Test Report FH-2003 for Surface Burning Characteristics of Building Materials per ASTM E84-09b - Dated: November 4, 2009

Test Report FH-2024 for Surface Burning Characteristics of Building Materials per ASTM E84-09b - Dated: December 29, 2009

Quality Assurance Documentation Continued

Test Report FH-2066 for Surface Burning Characteristics of Building Materials per ASTM E84-09b - Dated: April 27, 2010

Test Report FH-2147 for Surface Burning Characteristics of Building Materials per ASTM E84-10 - Dated: November 18, 2010

Test Report FH-2160 for Surface Burning Characteristics of Building Materials per ASTM E84-10 - Dated: January 17, 2011

Test Report FH-2264 for Surface Burning Characteristics of Building Materials per ASTM E84-11a - Dated: January 11, 2012

Test Report FH-2291 for Surface Burning Characteristics of Building Materials per ASTM E84-11a - Dated: April 20, 2012

Test Report FH-2466 for Surface Burning Characteristics of Building Materials per ASTM E84-13a - Dated: December 20, 2013

Pei Test Report No. 2008-0365 for FMVSS / CMVSS 302 Flammability Test - Dated: 2/19/2008

Pei Test Report No. 2010-0306 for FMVSS / CMVSS 302 Flammability Test - Dated: 3/15/2010

Pei Test Report No. 2010-0507 for FMVSS / CMVSS 302 Flammability Test - Dated: 4/12/2010

Pei Test Report No. 2011-0555 for FMVSS / CMVSS 302 Flammability Test - Dated: 4/13/2011

Pei Test Report No. 2012-0683 for FMVSS / CMVSS 302 Flammability Test - Dated: 4/19/2012

Pei Test Report No. 2013-0441 for FMVSS / CMVSS 302 Flammability Test - Dated: 3/20/2013

Pei Test Report No. 2013-0905 for FMVSS / CMVSS 302 Flammability Test - Dated: 6/28/2013

Pei Test Report No. 2014-0679 for FMVSS / CMVSS 302 Flammability Test - Dated: 4/24/2014

Pei Test Report No. 2014-1166 for FMVSS / CMVSS 302 Flammability Test - Dated: 7/30/2014

Pei Test Report No. 2015-0708 for FMVSS / CMVSS 302 Flammability Test - Dated: 5/8/2015

Pei Test Report No. 2016-1468 for FMVSS / CMVSS 302 Flammability Test - Dated: 8/3/2016

Pei Test Report No. 2016-1680 (A) for FMVSS / CMVSS 302 Flammability Test - Dated: 9/9/2016

Pei Test Report No. 2016-1680 (B) for FMVSS / CMVSS 302 Flammability Test - Dated: 9/21/2016

Pei Test Report No. 2016-1680 (C) for FMVSS / CMVSS 302 Flammability Test - Dated: 9/12/2016

Pei Test Report No. 2016-1680 (D) for FMVSS / CMVSS 302 Flammability Test - Dated: 9/12/2016

Pei Test Report No. 2016-1899 for FMVSS / CMVSS 302 Flammability Test - Dated: 10/13/2016

Pei Test Report No. 2016-2082 for FMVSS / CMVSS 302 Flammability Test - Dated: 11/15/2016

Pei Test Report No. 2017-6203 (A) for FMVSS / CMVSS 302 Flammability Test - Dated: 10/17/2017

Pei Test Report No. 2017-6203 (B) for FMVSS / CMVSS 302 Flammability Test - Dated: 10/17/2017

Pei Test Report No. 2017-6203 (C) for FMVSS / CMVSS 302 Flammability Test - Dated: 10/17/2017

Pei Test Report No. 2017-6203 (D) for FMVSS / CMVSS 302 Flammability Test - Dated: 10/17/2017

Product Pictures

Figure 1
Hardwood Plywood: Lauan



Figure 2
Particleboard



Figure 3
Medium Density Fiberboard (MDF)