



Product Evaluation Report

PER-08027

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Initial Listing
April, 2008

Re-Approved
January, 2020

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 1846 Eisenhower Drive
Elkhart, IN 46514 Goshen, IN 46526

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.

EPA TSCA Title VI Formaldehyde Emissions Level = .05 ppm or less for Hardwood Plywood (CC) and .09ppm or less for Particleboard, .11ppm or less for MDF and .09ppm or less for Thin MDF.

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 (as of April 2020)

Description	Thickness	Overlay / Finish	Adhesive
Hardwood Plywood	2.7mm	4 Mil Vinyl	✓
	3.6 mm	4 Mil Vinyl	✓
Indonesian Papau Plywood	3MM	4-6 Mil Vinyl	✓
MDF	3MM	45GM Paper	✓
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 April, 2020)

Description	Thickness	Overlay	Glue
HWPW-VC	18MM	RAW	N/A
HWPW-VC (Lamply)	9-12MM	RAW	RAW
HWPW-VC (Lamply)	5.2MM	UV Top Coat	None
HWPW-CC (Pine)	12MM	RAW	RAW
HWPW-VC (Pine/MDF)	9 -18MM	RAW	RAW
EPP	3.0MM	Lakeside Cherry	Unknown
EPP	3.0MM	4 Mil	Unknown
MDF (HD)	3.0MM	2-4 Mil Vinyl	PA 290
MDF	1-3/8"	Paint, Top Coat & Glazed	—
Meranti	2MM	2-4 Mil Vinyl	PA 290
Meranti	3.4MM	Proto Film	Unknown
CS Plywood	9MM	30-50GM	PA-116b
Chinese Birch	9MM	30-50GM	PA116b
Natural Birch	.5"	RAW	N/A
PVC	.170"	Raw	N/A
Particleboard	1/4"	RAW	RAW
	1/4"	30-50GM	PVA
Plywood	.5"	30gm Paper	PA116b
Weltech (F1S)	2.7MM	RAW	RAW
Weltech (F1S)	3.6MM	RAW	RAW

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 September, 2020)

Description	Substrate Thickness	Overlay	Glue
LDF	18mm	45GM Paper	PA1116-N/RP-156
Lauan	2.7 to 18mm	Raw	Raw
	2.7 to 18mm	30 - 60gm Paper	Yes
	2.7 to 18mm	4 - 6 Mil Vinyl	Yes
	2.7 to 18mm	4-6 Mil Vinyl	PUR/Hotmelt
	2.7 to 18mm	12 Mil Vinyl	PUR/Hotmelt
Lauan / Foam	2.7 to 18mm	4-6 Mil Vinyl	Hotmelt/PUR
Weltech Panel	2.7MM - 3.6mm	raw	PUR/Hotmelt
		30-50gm Paper	PUR/Hotmelt
		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: February, 2019

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

Test Report 17-02156 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 9, 2017

Test Report 17-02157 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 13, 2017

Test Report 17-02158 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 9, 2017

Test Report 17-02159 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 6, 2017

Test Report 17-02160 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 6, 2017

Test Report 17-02161 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 6, 2017

Test Report 17-02162 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 13, 2017

Test Report 17-02163 for Surface Burning Characteristics of Building Materials per ASTM E84-16 - Dated: February 6, 2017

Test Report 20-02103 for Surface Burning Characteristics of Building Materials per ASTM E84-19b - Dated: February 12, 2020

Test Report 20-02105 for Surface Burning Characteristics of Building Materials per ASTM E84-19b - Dated: February 12, 2020

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

Quality Assurance Documentation Continued

- 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
- Pei* Test Report No. 2018-0630 for FMVSS / CMVSS 302 Flammability Test - Dated: 7/13/2018
- Pei* Test Report No. 2018-6254 for FMVSS / CMVSS 302 Flammability Test - Dated: 7/17/2018
- Pei* Test Report No. 2018-6284 for FMVSS / CMVSS 302 Flammability Test - Dated: 8/31/2018
- Pei* Test Report No. 2019-6225 for FMVSS / CMVSS 302 Flammability Test - Dated: 7/1/2019
- Pei* Test Report No. 2019-6404 for FMVSS / CMVSS 302 Flammability Test - Dated: 12/9/2019
- Pei* Test Report No. 2020-6007 (A) for FMVSS / CMVSS 302 Flammability Test - Dated: 1/13/2020 - Revised 2/10/2020
- Pei* Test Report No. 2020-6007 (B) for FMVSS / CMVSS 302 Flammability Test - Dated: 1/27/2020
- Pei* Test Report No. 2020-6161 for FMVSS / CMVSS 302 Flammability Test - Dated: 7/16/2020
- Pei* Test Report No. 2020-6228 for FMVSS / CMVSS 302 Flammability Test - Dated: 9/11/2020

Product Pictures



Figure 1
Hardwood Plywood: Lauan



Figure 2
Particleboard

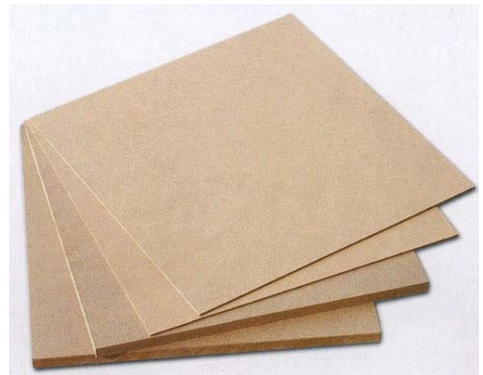


Figure 3
Medium Density Fiberboard (MDF)



Figure 4
Low Density Fiberboard: LDF

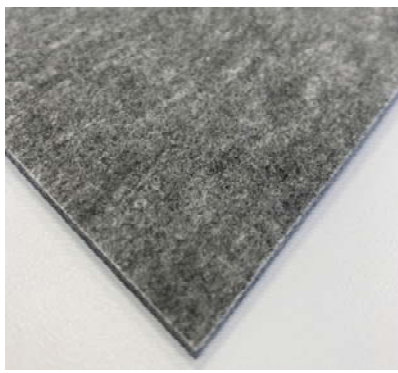


Figure 5 & 6
WeiTech Panels