



Product Evaluation Report

PER-18118

This Document Published By:

Progressive Engineering Inc.

Initial Listing
September , 2018

Re-Approved

58640 State Road 15
Goshen, Indiana 46528

574-533-0337
www.p-e-i.com

Listed Product
Various Sheet Good Laminations

Listed For
Fusion Wood Products
1600 West Mishawaka Avenue
Elkhart, IN 46517

Approved Laminator / Distributors

Fusion Wood Products
1600 West Mishawaka Avenue
Elkhart, IN 46517

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 **Fusion Wood Products** 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.

Listing Details

The Various Sheet Good Laminations covered under this **Product Evaluation Report** are used for cabinets, side walls, decorative wall panels, and door skins, which are supplied to the Manufactured Housing, RV, and Park Model markets.

These Various Sheet Good Laminations 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 a quarterly ongoing testing program and inspection program of **Fusion Wood Products** Quality Control Documentation.

Substrate Descriptions

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. The adhesive product is purchased from a supplier.

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

MDF is an engineered wood product that is manufactured by breaking down hardwood or softwood residuals into wood fibers, combining it with wax and a resin binder and forming panels by applying high temperature and pressure. The wax synthetic resin products are purchased from a supplier.

Laminated Products

The previously mentioned substrates are laminated by **Fusion Wood Products** with vinyl, paper, High Pressure Laminate (HPL) 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 Q.C. 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 and .11ppm or less for MDF.

Product Labeling

All the Various Sheet Goods that are to be covered by this **Product Evaluation Report** must be labeled with the following information:

1. FMVSS 302 & ASTM E84 Flame Spread Specifications
2. Date the finished good was produced (format must be month/year combination)
3. This **Product Evaluation Report** number & **Pei**'s name or Logo
5. California 93120 Compliant for Formaldehyde or CARB Phase II Compliant.
6. Statement of Compliance with "TSCA Title VI"

Note: If the finished product is two-sided bundle marking will be acceptable.

Listed Products

The following **Products** in Table 1 meet the requirements set forth by HUD for Formaldehyde levels under .2 ppm for HWPW (Meranti) and .3 ppm for Particleboard as well as RVIA/CARB Phase 2 requirements for Formaldehyde levels under .05 ppm for HWPW (VC/CC) and .09 ppm for Particleboard.

Table 1 - Listed Products (As of April, 2018)

Description	Substrate	Overlay	Glue
Indonesian Papua Hardwood	2.7 to 18mm Meranti	30- 50gm Paper	Sonoblend / PA-290
	2.7 to 18mm Meranti	4 Mil Vinyl	Sonoblend / PA-290

The following **Products** in Table 2 meet the Flame Spread requirements as tested per ASTM E84

Table 2 - Listed Products (As of September 2018)

Description	Substrate	Overlay	Glue	FSI Class*
Meranti Plywood	2.7 to 18mm	RAW	RAW	C
	2.7 to 18mm	4-6 Mil Vinyl	9E251-18 / 9A229-04	C
	2.7 - 18mm	30-50gm Paper	9E244-25M / 9A229-04	C
Indonesian Papua Plywood	3.4 - 18mm	RAW	RAW	C
	3.4 - 18mm	30-50gm Paper	9E244-25M / 9A229-04	C
	3.6 - 18mm	4-6 Mil Vinyl	9E251-18 / 9A229-04	C
	5.2 to 18mm	RAW	RAW	C
	5.2 to 18mm	30- 50gm Paper	9E244-25M / 9A229-04	C
	5.2 to 18mm	4-6 Mil Vinyl	9E251-18 / 9A229-04	B
Particle Board	1/2"	RAW	RAW	C
	1/2"	30 - 50gm Paper	9E244-25M/9A229-04	C
MDF	RAW	RAW	RAW	C
	1/8"	30 - 50gm Paper	9E244-25M / 9A229-04	C

*FSI = Flame Spread Index (A = 25 or Less, B = 26 - 75, C = 76 - 200)

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 June 2018)

Description	Substrate	Overlay	Glue
Hardwood Plywood (Meranti)	2.7 - 18mm Meranti	RAW	RAW
		30-50gm Paper	9E244-25M/9A229-04
		4 Mil Vinyl	
		6 Mil Vinyl	9E251-18/9A229-04
Indonesia Papua Hardwood	3.4mm - 18mm HDWD	RAW	RAW
		30-50gm Paper	9E244-25M/9A229-04
		6 Mil Vinyl	9E251-18/9A229-04
MDF	1/2"	RAW	RAW
		30 - 50gm Paper	9E244-25M/9A229-04
Particleboard	1/2"	RAW	RAW
		30-50gm Paper	9E244-25M/9A229-04

*Thickness of finished goods are approximates

Quality Assurance Documentation

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

A Quality Control Manual for **Fusion Wood Products** - Dated: January, 2018.

A Follow-up Listing & Inspection agreement between *Progressive Engineering Inc.* and **Fusion Wood Products**

A SDS sheet from **Fusion Wood Products** for Composite Wood Products

A *Pei* test report No. 2018-6226 - FMVSS 302 Flammability Test - Dated: June 22, 2018

A test report No. 18-08450 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 28, 2018.

A test report No. 18-08451 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 29, 2018.

A test report No. 18-08452 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 29, 2018.

A test report No. 18-08440 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 24, 2018.

A test report No. 18-08441 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 24, 2018.

A test report No. 18-08442 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 24, 2018.

A test report No. 18-08443 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 27, 2018.

A test report No. 18-08444 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 27, 2018.

A test report No. 18-08445 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 27, 2018.

A test report No. 18-08446 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 27, 2018.

A test report No. 18-08447 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 28, 2018.

A test report No. 18-08448 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 28, 2018.

A test report No. 18-08449 - Standard Test Method of Test for Surface Burning Characteristics of Building Materials - ASTM E84-18, dated August 28, 2018.

