

## FRL<sup>TM</sup> Technical Bulletin

### TECHNICAL INFORMATION

#### **BUILDING & CONSTRUCTION**

<u>Property</u>	<u>TEST</u>	<u>Standard</u>	<u>Typical Results</u>
Nominal Thickness			0.075"
Surface Burning Characteristics	ASTM E84	Class C	Class A
Smoke Developed Value	ASTM E84-04	<450	30
Flame Spread	ASTM E84-04	≤ 25	25
Wear Resistance (cycles)	NEMA 3.13	>700	3500
Flexural Strength	ASTM D790		22,000
Flexural Modulus	ASTM D790		2,000
Tensile Strength	ASTM D638		16,000
Tensile Modulus	ASTM D638		2,000
Water Absorption	ASTM D570		0.90%
Dimensional Change MD	NEMA 3.12	0.50%	0.3%
Dimensional Change XMD	NEMA 3.12	0.90%	0.4%
Izod Impact Resistance	ASTM D256		5.0
Ball Impact	NEMA 3.8	45"	60
Barcol Hardness	ASTM D2583		61
Cleanability	NEMA 3.4	<20	7
Appearance	NEMA 3.1		Complies
Light Resistance	NEMA 3.3	Slight Effect	Slight Effect
Boiling Water Resistance	NEMA 3.5	No Effect	No Effect
High Temperature Resistance	NEMA 3.6	Slight Effect	No Effect
Radiant Heat Resistance	NEMA 3.10	150	200

#### **MASS TRANSIT**

Smoke Density (Flaming Mode)	ASTM E662-03	Ds (1.5)<100	N/A
Smoke Density (Flaming Mode)	ASTM E662-03	Ds (4.0)<200	N/A
Smoke Density (Non-Flaming Mode)	ASTM E662-03	Ds (1.5)<100	
Smoke Density (Non-Flaming Mode)	ASTM E662-03	Ds (4.0)<200	
Surface Flamability, Radiant Heat	ASTM E162-02e	Is < 35	N/A

#### **EXECUTIVE AIRCRAFT**

Verticle Burn	FAR 25.853, Amdt 25-83	Pass/Fail	N/A
FAA Smoke Density	FAR 25.853, Amdt 25-83	Pass/Fail	N/A
Toxicity	Draegar Tube	Pass/Fail	N/A

## Limited Warranty

Subject to the limitations set forth below, Panolan Industries International Inc. expressly warrants that our products are reasonably free of defects in material and workmanship, and when properly handled and fabricated will conform, within accepted tolerances, to applicable manufacturing specifications as set forth in our technical brochure. This warranty shall extend to the original buyer for a period of twelve (12) months from the date of shipment of this product by Panolan Industries International Inc., and shall not be assignable by the original buyer. This warranty does not cover damage resulting from accident, misuse, alteration, abuse or lack of reasonable care.

Due to the variety of uses and applications to which this product may be put, and because the manufacturer has no control over the end products fabricated, the warranty set forth above is exclusive and in lieu of all other warranties, express or implied, in fact or by operation of law or otherwise, or arising by course of dealing or performance, custom or usage in the trade, including, without limitation, the implied warranties of fitness for a particular purpose and merchantability, and Panolan Industries International Inc. shall have no obligation or liability to any person or entity in connection with or arising from the furnishing, sale, installation or repair, use or subsequent sale of any product supplied by it.

The buyer's sole and exclusive remedy for any noncompliance with the express warranty set forth above shall be limited to repair or replacement of the defective product, or, in the event that repair or replacement is not feasible, return of the product and refund of the purchase price.

Under no circumstances shall the manufacturer be liable in excess of the purchase price of this product, in either tort or contract or otherwise, for any loss, damage or injury in connection with or arising from the purchase, use, or inability to use this product, or for any special, indirect, collateral, incidental, consequential or exemplary damages such as, but not limited to, loss of anticipated profits or other economic loss. because some states do not allow the exclusion or limitation of incidental or consequential damages, this limitation may not apply to you.

Retaining all documentation after purchasing laminate will significantly expedite claim resolution.

### **Panolan Industries International Inc.**

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Patent Pending

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