

**Test Values of Merino Fire Retardant (FR+) Laminate as per (EN438-3)  
Thickness :1.00mm**

<b>Properties</b>	<b>Test Method as per EN 438-2 CLAUSE NO.</b>	<b>Property or attribute</b>	<b>Unit (max or min)</b>	<b>Values as per EN 438-3</b>	<b>Merino Value</b>
<b>Thickness Maximum Variation</b>	5		mm	±0.10mm	±0.10mm
<b>Length &amp; Width</b>	6		mm	+10mm -0.0mm	+10mm -0.0mm
<b>Density</b>	EN ISO 1183	Density	g/cm <sup>3</sup>	≥1.35	>1.35
<b>Resistance to Surface wear</b>	10	Wear Resistance	Revolution (min)	≥350	>400
<b>Resistance to Impact by Small diameter Ball</b>	20	Spring Force	N(min)	≥20	>20
<b>Resistance to Scratching</b>	25	Force	Rating (see annex a)	3	≥3
<b>Dimensional stability at elevated temperature</b>	17	Cumulative dimensional change	% long % Cross	≤ 0.55 ≤ 1.05	<0.45 < 0.90
<b>Resistance to immersion in boiling water</b>	12	Appearance	Grade (min) Gloss Finish Other finishes	3 4	>3 >4
<b>Resistance to dry Heat at 180°C</b>	16	Appearance	Grade (min) Gloss Finish Other finishes	3 4	>3 >4
<b>Resistance to Staining</b>	26	Appearance	Rating Group-1&2 Group-3	≥5 ≥4	5 ≥4
<b>Resistance to water vapor</b>	14	Appearance	Grade (min) Gloss Finish Other finishes	3 4	>3 >4
<b>Light Fastness ( Xenon arc)</b>	27	Contrast	Gray Scale Rating	4 to 5	>4
<b>Resistance to cigarette burn</b>	30	Appearance	Grade (min)	3	>3
<b>Resistance to Cracking under stress</b>	23	Appearance	Grade (min)	4	>4

External Test report available for Merino FR+ laminate and can be provided on request.

**Note:** All our products comply to applicable standards, but results may differ based on the application and handling of the product. Please Refer <http://www.merinolaminates.com/warranties.aspx> for warranty clauses.