

## PROPERTIES OF FIBER SHEET PANEL

SPECIFICATION	UNIT	TEST STANDARD	REQUIRED VALUE	RESULTS
<b>ADHESIVE RESISTANCE (FRONT SURFACE)</b>	N/mm <sup>2</sup>	EN 323	≥ 0,55	1
<b>ADHESIVE RESISTANCE (BACK SURFACE)</b>	N/mm <sup>2</sup>	EN 323	≥ 0,55	0,70
<b>TEMPERATURE RESISTANCE (FRONT SURFACE)</b>	°C	---	≤ 80	≤ 80
<b>TEMPERATURE RESISTANCE (BACK SURFACE)</b>	°C	---	≤ 70	≤ 70
<b>FORMALDEHYDE RELEASE (COATED SHEET)</b>	mg/ m <sup>2</sup> h	EN ISO 12460-3	≤1,75 mg/ m <sup>2</sup> h (E0 limit)	0,42 mg/ m <sup>2</sup> h
<b>EVALUATION OF SURFACE RESISTANCE TO MICRO-SCRATCHES</b>	% change	TS CEN / TS 16611 (Method A)	≤ 10	9
<b>RESISTANCE TO COLD LIQUIDS (RESISTANCE TO CHEMICALS)</b>	Class	EN 12720+A1	5	5
<b>SURFACE RESISTANCE TO DRY HEAT (70°C)</b>	Class	EN 12722	5	5
<b>DETERMINATION OF SURFACE RESISTANCE TO WET TEMPERATURE (70°C)</b>	Class	EN 12721	5	5
<b>PANEL WARPING TOLERANCE</b>	mm		Short Side (1220 mm) ≤ 4 mm Long Side (2880 mm) ≤ 10 mm	Short Side (1220 mm) ≤ 4 mm Long Side (2880 mm) ≤ 10 mm

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<b>DENSITY (RAW MDF)</b>	kg/m <sup>3</sup>	EN 323	8 mm min. <b>790 Kg/m<sup>3</sup> ± 20 Kg/m<sup>3</sup></b> 16 mm S: min. <b>705 Kg/m<sup>3</sup> ± 20 Kg/m<sup>3</sup></b> 18 mm S: min. <b>690 Kg/m<sup>3</sup> ± 20 Kg/m<sup>3</sup></b>	8 mm: 780 Kg/m <sup>3</sup> 16 mm S: 700 Kg/m <sup>3</sup> 18 mm S: 690 Kg/m <sup>3</sup>
<b>THICKNESS TOLERANCE</b>	mm	EN 324-1 EN 622-1	± 0,20 mm	± 0,20 mm
<b>LENGTH AND WIDTH TOLERANCE</b>	mm/m	EN 324-1 EN 622-1	± 2 mm/m, maximum ± 5 mm	± 2 mm/m, maximum ± 5 mm

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<b>SQUARENESS TOLERANCE</b>	mm/m	EN 324-2 EN 622-1	2 mm/m	2 mm/m
<b>TOLERANCE OF SIDE SMOOTHNESS</b>	mm/m	EN 324-2 EN 622-1	1.5 mm/m	1.5 mm/m
<b>INFLATION IN THICKNESS 24 HOURS</b>	%	EN 317 EN 622-5	8 mm ≤ 17%, 16-18 mm ≤ 12%	8 mm: <b>14%</b> , 16-18 mm: <b>8%</b>
<b>BENDING RESISTANCE</b>	N/mm <sup>2</sup>	EN 310 EN 622-5	8 mm ≥ 23 N/mm <sup>2</sup> , 16-18 mm ≥ 20 N/mm <sup>2</sup>	8 mm: <b>37 N/mm<sup>2</sup></b> , 16-18 mm: <b>32 N/mm<sup>2</sup></b>
<b>FLEXURAL ELASTICITY MODULE</b>	N/mm <sup>2</sup>	EN 310 EN 622-5	8 mm ≥ 2700 N/mm <sup>2</sup> , 16-18 mm ≥ 2200 N/mm <sup>2</sup> ,	8 mm: <b>3580 N/mm<sup>2</sup></b> , 16-18 mm: 3100 N/mm <sup>2</sup>
<b>SURFACE STRENGTH</b>	N/mm <sup>2</sup>	EN 311	≥ 1 N/mm <sup>2</sup>	8 mm: 1,10 N/mm <sup>2</sup> 16-18 mm: 1,35 N/mm <sup>2</sup>
<b>INNER ADHESION</b>	N/mm <sup>2</sup>	EN 319 EN 622-5	8 mm ≥ 0,65 N/mm <sup>2</sup> 16-18 mm ≥ 0,55 N/mm <sup>2</sup>	8 mm: <b>1,20 N/mm<sup>2</sup></b> , 16-18 mm: 0,62 N/mm <sup>2</sup>
<b>FORMALDEHYDE CONTENT</b>	ppm	EPA 40 CFR TSCA Title VI § 770.10 and California Code of Regulations, sections 93120- 93120.12 ASTM E 1333-14 ASTM D 6007-14	≤ 0,11 ppm	0,07ppm
<b>HUMID CONTENT</b>	%	EN 322 EN 622-1	4% - 11%	%5,70

## PROPERTIES OF FOLIO

SPECIFICATION	UNIT	TEST STANDARD	REQUIRED VALUE	RESULTS
<b>THICKNESS (HG)</b>	mm	EN ISO 11833-2	0,30 ± 10%	0,30 mm

**PROPERTIES OF FOLIO**

<b>SPECIFICATION</b>	<b>UNIT</b>	<b>TEST STANDARD</b>	<b>REQUIRED VALUE</b>	<b>RESULTS</b>
<b>THICKNESS (SOFT TOUCH)</b>	mm	EN ISO 11833-2	0,20 ± 10%	0,20 mm (S.T Siena Wood: 0,30 mm)
<b>THICKNESS (SUPRAMAT)</b>	mm	EN ISO 11833-2	0,25 ± 10%	0,25 mm
<b>THICKNESS (BACK SURFACE FOIL)</b>	mm	EN ISO 11833-2	0,15 ± 10%	0,15 mm
<b>GLOSSINESS (HG)</b>	20°	EN ISO 2813	≥ 80	82
<b>SURFACE ROUGHNESS (HG)</b>	R <sub>a</sub> , μm	EN ISO 4288	≤ 0,10 μm	0,02 μm
<b>SURFACE TENSION (FRONT SURFACE FOIL)</b>	mN/m	ISO 8296	≥ 38 mN/m	38 mN/m - 40 mN/m
<b>SURFACE TENSION (BACK SURFACE FOIL)</b>	mN/m	ISO 8296	≥ 38 mN/m	38 mN/m - 40 mN/m
<b>COLOR MEASUREMENT (ΔE)</b>	---	DIN 5033-4	≤ 0.80	≤ 0.80
<b>SCRATCH RESISTANCE (SUPRAMAT)</b>	H	ISO 15184	≥H	6 H
<b>SCRATCH RESISTANCE (SOFT TOUCH)</b>	H	ISO 15184	≥H	3H
<b>SCRATCH RESISTANCE (HG)</b>	H	ISO 15184	≥H	2H
<b>SCRATCH RESISTANCE (BACK SURFACE FOIL)</b>	H	ISO 15184	≥H	H
<b>SCRATCH RESISTANCE (SUPRAMAT)</b>	N	ISO 4586-2	≥0.5N	1,5 N
<b>SCRATCH RESISTANCE (SUPRAMAT)</b>	N	ISO 4586-2	≥0.5N	1 N
<b>SCRATCH RESISTANCE (HG)</b>	N	ISO 4586-2	≥0.5N	0,5-1 N
<b>SCRATCH RESISTANCE (BACK SURFACE FOIL)</b>	N	ISO 4586-2	≥0.5N	0,5 N
<b>UV RESISTANCE (ΔE)</b>	50 hours	TS EN 4892 (1-2-3)	≤ 0.80	≤ 0.80

## PROPERTIES OF POLYURETHANE GLUE

- ✓ Polyurethane based reactive hot melt adhesive system
- ✓ White heat resistance (>150°C) and elastically in cold
- ✓ High first adhesion power
- ✓ Chemical bond formation in a couple of days
- ✓ Perfect resistance against water
- ✓ Thermoset formation of adhesion connection
- ✓ Resistance against several solvers

## STAIN RESISTANCE TESTS

SUBSTANCE	TIME	FRONT SURFACE	BACK SURFACE
COFFEE	16h	5	5
MILK	16h	5	5
WATER	16h	5	5
ACETONE	10s	2	4
OLIVE OIL	16h	5	5
CLEANING DETERGENT	1h	5	5

Numerical Rating	Description
5	<b><u>No change</u></b> Test area indistinguishable from adjacent surrounding area
4	<b><u>Minor change</u></b> Test area distinguishable from adjacent surrounding area, only when the light source is mirrored on the test surface and is reflected towards the observer's eye, e.g. discoloration, change in gloss and colour no change in the surface structure, e.g. swelling, fibre raising, cracking, blistering
3	<b><u>Moderate change</u></b> Test area distinguishable from adjacent surrounding area, visible in several viewing directions, e.g. discoloration, change in gloss and colour
2	<b><u>Significant change</u></b> Test area distinguishable from adjacent surrounding area, visible in all viewing directions, e.g. discoloration, change in gloss and colour, and /or structure of the surface slightly changed, e.g. swelling, fibre raising, cracking, blistering
1	<b><u>Strong change</u></b> The structure of the surface being distinctly changed and / or discoloration, change in gloss and colour, and / or the surface material being totally or partially removed, and / or the filter paper adhering to the surface.