



### Panel types: 40LA/40LF/40LL

40L panels consist of a 38mm-thick high density (nominal 720kg/m<sup>3</sup>) particle board core strengthened by suitable high performance resins. It is provided with a 0.45mm-thick black plastic edge material self-extinguishing, non-creaking and PVC free.

**40LA panel:** the backing is a nominal 0.05mm-thick aluminium foil, in order to create an excellent fire and humidity barrier and at the same time an equipotential reinforcement for the purpose of maintaining the flooring's electrical continuity properties.

**40LF panel:** to improve the flexural stiffness and its overall mechanical resistance, the panel is produced by applying a nominal 0.5mm-thick steel sheet (hot dip galvanizing treatment) on the lower face. This also provides an excellent barrier guarding against fire and moisture, and an equipotential reinforcement for the purpose of maintaining the flooring's electrical continuity properties.

**40LL panel<sup>(1)</sup>:** specific panel (40LLL) produced by applying a 0.9mm-thick plastic laminate sheet on the lower and the upper faces to improve the panel balancing.

*(1) The mechanical properties of the 40LLL panel are obtained increasing by 5% the values of the panel 40LAL, excluding the working loads.*



Table 1 – Panel type

	Bare	Aluminium foil	Galvanized steel sheet	High pressure laminate	Vinyl	Linoleum	Rubber	Carpet	Parquet	Ceramic - Stoneware	Recomposed stone	Natural stone
Finishing material	0	A	F	L	V	D	G	C	P	T	R	S
<b>Panel</b>												
40LA aluminium foil	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40LF galvanised steel sheet	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40LL plastic laminate	x	x	x	✓	x	x	x	x	x	x	x	x

Legend: ✓ = ok; ✖ = reserve on feasibility; ✕ = no.



Table 2 – Physical properties

	Test standard	U.M.	Value	Tolerance
Nominal dimensions	EN 12825	mm	600 x 600	±0.2 (class1)
Nominal thickness <sup>(1)</sup>		mm	38	±0.3 (class1)
Flatness	-	mm	≤0.6	-
Diagonal difference	-	mm	≤0.4	-
Inclined edge angle	-	degrees	4	-
Transverse electrical resistance (panel with cover):				
– non anti-static (or physiological anti-static EN 1815)	EN 1081	Ω	REV > 2x10 <sup>10</sup>	
– static dissipative			10 <sup>7</sup> < REV ≤ 2x10 <sup>10</sup>	
– conductive			5x10 <sup>5</sup> < REV ≤ 10 <sup>7</sup>	
Fire reaction of the base panel 28LA	EN 13501-1	Class Cfl-s1		
Fire resistance of the base panel 40NA/40NF	EN 13501-2	REI 30		
Self extinguishing plastic edging	UL94	Class V0		

*(1) The value needs to increase of the upper and lower covers thickness.*



Table 3 – Mechanical properties

In compliance with test standard EN 12825		40LA panel				40LF panel			
		Type of stringer <sup>(1)</sup>				Type of stringer <sup>(1)</sup>			
Finishing: 0 A V D G C P		S.R.	S/L	M	P	S.R.	S/L	M	P
Point load centre of side at 2.5mm deflection	kN	2.6	1.8	2.0	2.4	4.4	2.3	2.8	3.1
Working load centre of side (safety factor 2) <sup>(2)</sup>	kN	2.8	2.8	2.9	3.0	4.5	4.5	4.6	4.7
Point load centre of panel at 2.5mm deflection	kN	3.7	2.6	3.2	3.6	6.6	4.0	4.5	5.1
Working load centre of panel (safety factor 2) <sup>(2)</sup>	kN	4.6	4.6	4.8	5.0	7.5	7.5	7.6	7.8
Distributed load at 2.5mm deflection	kN/m <sup>2</sup>		14.0	18.0	22.0		21.0	25.0	31.0
Load/deflection class			1/B	1/A	2/C		4/-	4/C	4/C
Finishing: F L		S.R.	S/L	M	P	S.R.	S/L	M	P
Point load centre of side at 2.5mm deflection	kN	2.7	1.9	2.1	2.5	4.6	2.5	3.0	3.3
Working load centre of side (safety factor 2) <sup>(2)</sup>	kN	3.0	3.0	3.1	3.2	4.6	4.6	4.7	4.8
Point load centre of panel at 2.5mm deflection	kN	3.9	2.8	3.5	3.9	6.8	4.2	4.8	5.4
Working load centre of panel (safety factor 2) <sup>(2)</sup>	kN	5.0	5.0	5.2	5.4	7.7	7.7	7.8	8.0
Distributed load at 2.5mm deflection	kN/m <sup>2</sup>		15.0	20.0	24.0		22.0	27.0	33.0
Load/deflection class			2/C	2/C	2/B		4/-	4/C	4/C
Finishing: T R S		S.R.	S/L	M	P	S.R.	S/L	M	P
Point load centre of side at 1.0mm deflection	kN	2.6	1.1	1.2	1.4	3.5	1.8	1.9	2.0
Working load centre of side (safety factor 2) <sup>(2)</sup>	kN	2.0	2.0	2.0	2.1	4.1	4.1	4.2	4.3
Point load centre of panel at 1.0mm deflection	kN	3.5	2.0	2.1	2.3	5.8	3.0	3.4	3.5
Working load centre of panel (safety factor 2) <sup>(2)</sup>	kN	2.4	2.4	2.4	2.5	6.3	6.3	6.4	6.5
Distributed load at 1.0mm deflection	kN/m <sup>2</sup>		8.0	9.0	11.0		12.0	15.0	16.0
Load/deflection class			1/A	1/A	1/A		3/A	3/A	3/A

**Note:** the values refer to tests performed with structures up to 600mm height.

<sup>(1)</sup> Type of structure: R.S. = panel tested on rigid supports; S = stringerless; L/M/P = with light/medium/heavy stringers.

<sup>(2)</sup> The ultimate load is obtained multiplying the working load by the safety factor.