



YILDIZ ENTEGRE ROMANIA S.A.

Sediul social: Oras Pantelimon, Soseaua de Centura , nr. 66, Halele Mustang Traco, Hala nr. 6, Biroul nr.2, judet Ilfov
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Sediu : Soseaua de Centura Nr:66 Oras PANTELIMON
Site-ul : www.yildizentegre.ro
Subiect : The Factory Quality Control Process

The Factory Quality Control Process of our Laminate Flooring product is made according to the requirements of EN 13329 + A1 Standard within the ISO 9001 Management Systems.

Best regards

Tiberiu Avram
Sales Director



Best Regards.

Mustafa KORKMAZ
General Manager

European Norm for Laminate Floor Coverings

NO	Technical characteristics	Test/requirement standard	Requirement	Units
1	Thickness of the element, (t) without underlay	TS EN 13329+A1	$\Delta t_{\text{average}} \leq 0,50$, relative to nominal value $t_{\text{max}} - t_{\text{min}} \leq 0,50$	mm
2	Thickness of the element, (t) with pre-attached underlay		$\Delta t_{\text{average}} \leq 0,50$ mm, relative to nominal value $t_{\text{max}} - t_{\text{min}} \leq 0,80$ mm	mm
3	Width of the surface layer, (w)		$\Delta W_{\text{average}} \leq 0,10$, relative to nominal value $W_{\text{max}} - W_{\text{min}} \leq 0,20$	mm
4	Length of the surface layer, (l)		$l \leq 1\,500$ mm: $\Delta l \leq 0,5$ mm $l > 1\,500$ mm: $\Delta l \leq 0,3$ mm/m	mm
5	Squareness of the element, (q)		$q_{\text{max}} \leq 0,20$	mm
6	Straightness of the surface layer, (s)		$s_{\text{max}} \leq 0,30$	mm/m
7	Flatness of the element		$f_{\text{width concave}} \leq \% 0,15$, $f_{\text{width convex}} \leq \% 0,20$ $f_{\text{length concave}} \leq \% 0,50$, $f_{\text{length convex}} \leq \% 1,00$	%
8	Openings between elements, (o)		$O_{\text{average}} \leq 0,15$, $O_{\text{max}} \leq 0,20$	mm
9	Height difference between elements, (h)		$h_{\text{average}} \leq 0,10$, $h_{\text{max}} \leq 0,15$	mm
10	Surface Soundness	TS EN 13329+A1 TS EN 311	Class 31 $\geq 1,00$ Class 32 - 33 $\geq 1,25$	N/mm ²
11	Thickness swelling	TS EN 13329+A1	Class 31 - 32 ≤ 18 Class 33 ≤ 15	%
12	Moisture content	TS EN 322	% 4 to % 10 $H_{\text{max}} - H_{\text{min}} \leq \% 3$	%
13	Formaldehyde content Class EI	TS EN 717-1 TS EN ISO 12460-3	EI için $\leq 0,124$ EI için $\leq 3,5$	mg/m ³ mg/m ² h
14	Dimensional variations after changes in relative humidity, (δl , δw)	TS EN 13329+A1 TS EN 318	$\delta l_{\text{average}} \leq 0,9$, $\delta w_{\text{average}} \leq 0,9$	mm
15	Abrasion resistance	TS EN 13329+A1	AC3 ; ≥ 2000 AC5 ; ≥ 6000 AC4 ; ≥ 4000	Tour
16	Impact Resistance to small ball	TS EN 13329+A1 TS EN 438-2	<u>Big ball</u> Class 31 ≥ 500 mm ≥ 8 N, Class 32 ≥ 750 mm ≥ 12 N Class 33 ≥ 1000 mm ≥ 15 N	N, mm
17	Impact Resistance to big ball			
18	Locking strength	ISO 24334	Class 32 - 33 $f_{l0,2} \geq 1$ (length) $f_{s0,2} \geq 2$ (width)	kN/m
19	Resistance to staining	TS EN 438-2	5 (group 1 ve group 2), 4 (group 3)	Grade
20	Effect of a furniture leg	TS EN 425	No damage shall be visible, when tested with foot type 0	-
21	Effect of a castor chair	TS EN 424	25 000 cycles, No damage	-
22	Surface defects	TS EN 438-2	Minor surface defects as defined in the EN 438 series are permitted.	-
23	Static indentation	TS EN ISO 24343-1	residual indentation $\leq 0,05$ mm	mm
24	Lightfastness	sample part ≥ 4 of grey scale according to EN 20105— A02 EN ISO 4892-2:200 6/A1:2009 procedure B – cycle 5 (50 % rel. hum.) a b	Colour contrast between unexposed and exposed sample part ≥ 4 of grey scale according to EN 20105— A02	-



K. Gagni HETUZ