

# tier<sup>TM</sup>

*Fabulous, functional, forever.*

TECHNICAL DATA SHEET 2022



A PRODUCT BY **EVA-LAST**<sup>®</sup>  
INSPIRED BY NATURE, DESIGNED FOR LIFE.

[www.tierflooring.com](http://www.tierflooring.com)

**MANUFACTURERS DETAILS**
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**Product name:** Eva-Last® TIER™ flooring products.

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**TIER™ indoor flooring**

Having over a decade of experience in the field of extrusion, Eva-Last® has adapted the technique to develop a revolutionary extruded stone plastic composite vinyl flooring.

Our aim is to continually strive to improve our products to give you the most cost-effective product packed with much more benefits in the long run. The manufacturing process also includes a new premixing technique and additional quality control procedure.

**Surface properties**

Property	Applicable standard	Applicable test method	Requirement	Result	Conclusion
Wear resistance	-	ISO 1518-1	≤ 0.015 g/1 000 rev	0.01 g	Pass
	EN 16511	EN 13329	≥ 4 000 cycles	≥ 4 000 cycles	Class 34, heavy commercial
	NALFA LF 01-2011	NALFA LF 01-2011	≥ 6 000 cycles	≥ 6 000 cycles	Class 4, heavy commercial
Scratch	-	ISO 1518-1	≥ 2 500 g	3 200 g	Pass
Surface bonding	NALFA LF 01-2011	EN311/NALFA LF 01-2011	≥ 1.25 N/mm <sup>2</sup>	1.56 N/mm <sup>2</sup>	Class 4, heavy commercial
Static load (250 lbs/115 kg)	NALFA LF 01-2011	ASTM F970	≥ 8 MPa	15 MPa	Class 4, heavy commercial
Residual indentation	ASTM F1700	ASTM F1914	≤ 8 % (140 lbs/63 kg)	1.70 %	Pass
	EN 16511	EN 433/ISO 24343-1	≤ 0.15 mm	0.03 mm	Class 34, heavy commercial
Impact resistance (big ball)	EN 16511	EN 13329	≥ 1 800 mm	> 1 800 mm	IC3, Class 34, heavy commercial
	NALFA LF 01-2011	NALFA LF 01-2011	≥ 1 400 mm	> 1 400 mm	Class 4, heavy commercial
Impact resistance (small ball)	EN 13329	EN438	≥ 15 N	23 N	IC3, Class 34, heavy commercial
	NALFA LF 01-2011	NALFA LF 01-2011	≥ 500 mm (19.7 in)	900 mm	Class 4, heavy commercial
Slip resistance	EN14041	EN 13893	DryCOF ≥ 0.3	0.51	Class DS
	-	ASTM C1028	≥ 0.5	0.62	Meet ADA recommendation
	-	D 51130	≥ R9	R9	Anti-slip resistance R9
Color fastness to light	EN 13329	ISO 105-B02:1994, Method 3a	≥ Grade 6	> 6	Pass
	NALFA LF 01-2011	NALFA LF 01-2011	Slight change only	Slight change only	Class 4, heavy commercial
Resistance to staining	EN 16511	EN 438-2	Group 1 and 2: grade 5, group 3: grade 4	Group 1 and 2: grade 5, group 3: grade 4	Class 34, heavy commercial
	ASTM F1700	ASTM F925	Slight change only	No change	Pass
	NALFA LF 01-2011	NALFA LF 01-2011	Slight change only	No change	Class 4, heavy commercial

**Chemical properties**

Property	Applicable standard	Applicable test method	Requirement	Result	Conclusion
Formaldehyde emission	CARB2	ASTM 6007	≤ 0.11 ppm Release ≤ 0.124 mg/m <sup>3</sup>	Undetected	CARB2
	EN 14041	EN 717-1	Release ≤ 0.124 mg/m <sup>3</sup>	Undetected	E0
VOC	Decret No2011-321	ISO 16000	TVOC < 1000 µg/m <sup>3</sup>	31 µg/m <sup>3</sup>	VOCA+
	DIBT	ISO 16000	TVOC < 1000 µg/m <sup>3</sup>	29 µg/m <sup>3</sup>	Meet AgBB requirement - U mark certified
	Floorscore	Californian 01350	Within CREL/TAC	26	Floorscore certified
Ortho-phthalates	Prop 65	Spectrometry	Ortho-phthalate free	Undetected	Ortho-phthalate free, Comply with Prop 65
Lead	CPSIA	CPSC-CH-E-1002-08	≤ 90 ppm	Undetected	Meet children toy regulation
PAHs	EU REACH regulation No. 1907/2006	Spectrometry and chromatography	< 1 mg/kg	0.7 mg/kg	Meets requirement of a product that can be placed in a mouth
PCP	EN 14041	EN 12673	< 1 ppm	Undetected	Pass
Substances of Very High Concern (SVHC) (mercury, chromium VI, Cadmium, SCCp, benzene, Xylene, tributyltin, etc)	EU REACH regulation No. 1907/2006	Spectrometry and chromatography	≤ 0.1 % (w/w)	Undetected	REACH compliant

**Physical properties**

Property	Applicable standard	Applicable test method	Requirement	Result	Conclusion
Heat exposure resistance 80°C/180°F	EN 16511	ISO 23999	ΔW/ΔL ≤ 0.25 %	0.03 %	Class 34, heavy commercial
	ASTM 1700	ASTM F2199	ΔW/ΔL ≤ 0.16 %	0.03 %	Pass
Dimensional variation (humidity change)	EN 16511	ISO 24339	ΔW/ΔL ≤ 0.15 %	ΔW/ΔL ≤ 0.01 %	Class 34, heavy commercial
Swelling after submersion in water	EN 16511	ISO 24336	≤ 12 %	0%	Class 34, heavy commercial
	NALFA LF 01-2011	NALFA LF 01-2011	≤ 12 %	0%	Class 4, heavy commercial
Impact sound reduction (IIC)	-	ASTM E492-09	-	IIC = 71	IIC = 71
Sound transmission reduction (STC)	-	ASTM E90-09	-	STC = 75	STC = 75
Locking strength (23°C)	EN 16511	ISO 24334	Long side ≥ 2.0 kN/m Short side ≥ 3.5 kN/m	Long side ≥ 6.3 kN/m, Short side ≥ 5.4 kN/m	Class 34, heavy commercial
Thermal conductivity	EN 14041	EN 12667	-	0.173 W/(mK)	Suitable for underfloor heating system
Thermal resistance (R value)	-	ASTM C518	-	0.58 m <sup>2</sup> K/W	Suitable for underfloor heating system
Reaction to fire	EN 14041	EN 13051-1	-	CHF = 9.4 kW/m <sup>2</sup>	Class Bfl - s1
Fire resistance (CHF)	-	ASTM E648/662	-	0.94 W/cm <sup>2</sup>	Class 1

**Acoustic properties**

Property	Applicable standard	Applicable test method	Requirement	Result	Conclusion
Impact sound	ISO 717-2	ISO 10140-3	Application dependent	L <sub>n,w</sub> = 51 dB	Application dependent
				C <sub>i</sub> = 1 dB	
Impact sound reduction	ISO 717-2	ISO 10140-3	Application dependent	ΔL <sub>w</sub> = 22 dB	Application dependent
				C <sub>i,d</sub> = -11 dB	
Impact sound reduction (IIC)	ASTM E492	ASTM E492-09	Application dependent	IIC = 71	Application dependent
Sound transmission reduction (STC)	ASTM E90	ASTM E90-09	Application dependent	STC = 75	Application dependent



## OTHER INFORMATION

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