



Specification Sheet Rigid Core Luxury Vinyl Flooring

Version: EU

Last update: 1/30/2019

TECHNICAL SPECIFICATIONS

Bevel Lock	Cut Tight	UFH Installation	See IM Floating
Layer	Thickness (mm)	Type	
Top Layer	0.55	Antibacterial, anti-slip quartz enhanced UV cured coating	
Core	3.45	Waterproof thermoplastic composite	
Backing Layer	1.0	EVA	
Total	5.0		

CERTIFICATIONS & CHEMICAL PROPERTIES





Norm	Item	Test method	Requirement	Result
EN 14041	Emissions	EN 717-1	≤ 0.124 mg/m ³	E1
Decret No2013-323	Emissions	ISO 16000	TVOC<1000µg/m ³	VOC A+
GreenGuard Gold	Emissions	Spectrometry, chromatography	TVOC≤220µg	GreenGuard Gold Certified
Prop 65	Orthophthalates	Spectrometry	ND	Compliant
CPSIA	Lead	CPSA-CH-1002-08	≤ 90ppm	Compliant
EU REACH Regulation	PAHS	Spectrometry, chromatography	<1mg/kg	Compliant
	SVHC	Spectrometry, chromatography	≤ 0.1% (w/w)	Compliant
EN 14041	CE Certification	Multiple	Multiple	Compliant

PHYSICAL PROPERTIES

Norm	Item	Test Method	Requirement	Result
ISO 10582	Dimensional Stability	ISO 23999	ΔW/ΔL ≤ 0.15% (commercial)	Compliant
	Curline	ISO 23999	≤1mm	Compliant
	Length tolerance	ISO 24342	≤ ±0% of nominal length up to 0.5 mm max.	Compliant
	Width tolerance	ISO 24342	≤ 0.10% of nominal width up to 0.5 mm max.	Compliant
	Thickness tolerance	ISO 24346	+/- 0.13mm	Compliant
	Squareness	ISO 24342	-/- 0.10mm ≤ 0.25mm/≤ 400mm	Compliant
	Flatness	ISO 10582 Appendix B	≤ 0.35mm/≥ 400mm Length: ≤ 0.50% (concave) ≤ 1.0% (convex) Width: ≤ 0.10% (concave) ≤ 0.15% (convex)	Compliant
	Openings between tiles/planks	ISO 10582 Appendix C	0.15mm	Compliant
	Height difference between tiles/planks	ISO 10582 Appendix C	0.1mm	Compliant
	Residual Indentation	ISO 24343-1	≤ 0.1mm	Compliant
EN 16511	Castor chair Resistance to Heat	ISO 4918 ISO 105-802:2014	Slight change only ≥ Grade 6	Suitable for moderate class of use Compliant
	Locking strength	ASTM F1515	ΔE ≤ 8	Compliant
	Wear resistance	ISO 10582 Appendix D	1.5 kN/m (only for commercial)	Meet commercial requirements
	Impact resistance	EN 13329	Refer to the standard	Pass, Class 33
	Micro scratch	EN 13329 Annex A	Refer to the standard	Pass, Class 34
	Furniture leg	EN 16094	Refer to the standard	Pass, Class 34
	Resistance to staining	EN 424	Refer to the standard	Pass, Class 34
	Swelling	EN 438-2	Refer to the standard	Pass, Class 34
	Dimensional variation due to climate	ISO 24336	Refer to the standard	Pass, Class 34
	Surface Integrity	ISO 24339	Refer to the standard	Pass, Class 34
ASTM F3261	Surface Integrity	ASTM F1514	No puncture	Meets commercial requirements
	Residual Indentation	ASTM F1514	≤ 0.18mm (70lb/34kg)	Meets commercial requirements
	Static load	ASTM F970/ASTM F387	≤ 0.13mm	Meets commercial requirements
NALFA LF 01-2011	Resistance to light	ASTM F1514	ΔE ≤ 8	Meets commercial requirements
	Resistance to Chemicals	NALFA LF 01-2011	Slight change only	Class 4, meets commercial requirements
	Impact Resistance	NALFA LF 01-2011 3.5	≥ 1400mm	Class 4, meets commercial requirements
	Impact Resistance	NALFA LF 01-2011 3.6	≥ 500mm	Class 4, meets commercial requirements
EN 14041	Thermal Resistance (R)	EN 12667/ASTM C518	NA	Suitable for underfloor heating systems
	Slipperiness	EN 13893	≥ 0.3	Pass
	Reaction To fire	EN 13051-1	NA	Class Bfl-S1
	Static Electrical Propensity (voluntary)	EN 1815	≤ 2.0kV	NA
Others	Density	ISO 23996	NA	Around 1650kg/m ³
	Airborne sound transmission	ISO 10140-2	NA	67db
	Impact sound transmission	ISO 10140-3	NA	42db
	Impact sound transmission - Reduction	ISO 10140-1	NA	18db
	Slipperiness	ANSI A137-1	≥ 0.42	Pass
	Rolling Load	DIN 51130	NA	R10
	Fire Resistance (CHF)	ASTM F2753	NA	NA
		ASTM E648/NFPA 253	≥ 0.45	Class 1

LEED SCORECARD

LEED was developed to address all buildings everywhere, regardless of where they are in their life cycle. From hospitals to data centers, from historical buildings to those still in the design phase, there is a LEED certification program for every building. Our products will contribute value to a building's LEED v4 Scorecard in the following LEED certification program categories recognized by the USGBC as per following

LEED Programme Certification	Category	Credit Title	LEED Points Attainable	Credit Description	How our product contributes to obtaining LEED points
 Building Design and Construction	Indoor Environmental Quality	Credit 1: Enhanced Indoor Air Quality Strategies – Option 2 Additional Enhanced IAQ Strategie – option D	1 point ID&C, 2 points Retail CI	To reduce concentrations of chemical that can damage air quality, human health, productivity, and the environment.	1. Formaldehyde emission are less than 0.05mg/m3, TVOCs are less than 0.5mg/m3. 2. The product is GreenGuard Gold certified.
		Credit 2: Low-Emitting Materials – Option1 Flooring	1 point		1. VOC emission are less than 0.5mg/m3. 2. The products is GreenGuard Gold certified.
		Credit 4: Indoor Air Quality Assessment - Option 2 Air Testing	2 points	To establish better quality indoor air in the building	1. Formaldehyde emission are less than 0.05mg/m3, TVOCs are less than 0.5mg/m3. 2. The product is GreenGuard Gold certified.
		Credit 9: Acoustic Performance	2 points	To provide effective acoustic design	The product has a high acoustic performance. Rw and Ln,w test report are available on request
	Material & Resource	Credit 4: Material ingredient– Option 2 Credit 6 – PBT source reduction: lead, cadmium and copper	1 point 1 point	Minimize the use and generation of harmful substances To reduce the release of persistent, bioaccumulative, and toxic chemicals	The product is 100% REACH compliant The product is free of lead, cadmium and copper
 Building Operations and Maintenance	Material & Resource	Credit 3: Purchasing - Facility maintenance and renovation	1 point	To reduce the environmental harm from materials used in building renovations	1. The product is 100% REACH compliant 2. Formaldehyde emission are less than 0.05mg/m3, TVOCs are less than 0.5mg/m3. 3. Test report according to ISO 16000 is available on request. 3. The product is GreenGuard Gold certified.
	Indoor Environmental Quality	Credit 2: Contaminant Control – Option 4 Air Testing	1 point	Demonstrate that contaminants do not exceed concentration levels listed	The products is GreenGuard Gold certified.
 Homes		Credit 7: Low-Emitting Materials	0.5 point	To reduce occupants' exposure to airborne chemical contaminants	The product is GreenGuard Gold certified and meet the requirements of CA Section 01350. The product is made with ULEF or non-added formaldehyde material
	Material & Resource	Prerequisite – Durability management	0 point (Prerequisite)	To promote durability and performance of the building	The product is water resistant
 Interior Design and Construction	Indoor Environmental Quality	Credit 1: Enhanced Indoor Air Quality Strategies – Option 2 Additional Enhanced IAQ Strategie – option D	1 point ID&C, 2 points Retail CI	To reduce concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment	1. Formaldehyde emission are less than 0.05mg/m3, TVOCs are less than 0.5mg/m3. 2. The product is GreenGuard Gold certified.
		Credit 2: Low-Emitting Materials – Option1 Flooring	1 point		1. VOC emission are less than 0.5mg/m3. 2. The products is GreenGuard Gold certified.
		Credit 4: Indoor Air Quality Assessment - Option 2 Air Testing	2 points	To establish better quality indoor air in the building	1. Formaldehyde emission are less than 0.05mg/m3, TVOCs are less than 0.5mg/m3. 2. The product is GreenGuard Gold certified.
		Credit 9: Acoustic Performance	2 points	To provide workspaces and classrooms effective acoustic design	The product has a high acoustic performance. Rw and Ln,w test report are available on request
	Material & Resource	Credit 4: Material ingredient– Option 2	1 point	Minimize the use and generation of harmful substances	The product is 100% REACH compliant

WELL SCORECARD

The WELL Building Standard is founded on the understanding that facets of our environment interact with personal, genetic and behavioral factors to shape our overall health and well-being. By compiling leading practices in building design and management and referencing existing standards and best practice guidelines set by governmental and professional organizations, WELL works to harmonize and clarify existing thresholds and requirements.

Facet	Feature	Part	Requirements	Concept score	How our product contribute to obtain WELL level certification
AIR	01. Air quality standards	1. Standards For Volatile Substances		PRECONDITION	a. Formaldehyde emission are less than 0.05mg/m3. b. The total volatile organic compounds are less than 0.5mg/m3.
		The following conditions are met: a. Formaldehyde levels less than 27ppb (0.027ppm) b. Total volatile organic compounds less than 500ug/m3 (0.5mg/m3)			
	04. VOC Reduction	1. Interior Paints and Coatings		PRECONDITION	a. The VOC limits for California Air Resources Board (CARB) are less than 0.13ppm. b. Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m3 (in compliance with CDPH/EHLB Standard Method v1.1-2010). The product is GreenGuard Gold certified
		The VOC limits of newly applied paints and coating meet one of the following requirements: a. 100% of installed products meet California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011 for VOC content. b. At minimum 90%, by volume, meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions			
		3. Flooring		PRECONDITION	Conforms to the CDPH/EHLB Standard Method v1.1-2010 (California Section 01350), effective January 1, 2012, for the school classroom and private office parameters when modeled as Flooring. The product is GreenGuard Gold certified
	11. Fundamental Material Safety	1. Asbestos and Lead Restriction		PRECONDITION	a. No asbestos b. The product contain less than 100 ppm.
		2. Lead Abatement		PRECONDITION	The product contain less than 90 ppm.
		3. Asbestos Abatement		PRECONDITION	The product contain less than 90 ppm.
	25. Toxic Material Reduction	2. Flame Retardant Limitation		OPTIMIZATION	The product don't contain halogenated flame retardants
		3. Phthalate (Plasticizers) Limitation		OPTIMIZATION	In accordance with US Consumer Product Safety Improvement Act 2008 (CPSIA) (16 U.S.C. 1502, Section 108 & California Proposition 65 & Annex XV item 51832 of the REACH Regulation (EC) No. 1907/2006 and amendment No. 552/2009, the product contains less than 100ppm.
		5. Urea-Formaldehyde Restriction		OPTIMIZATION	The product contains urea-formaldehyde less than 100ppm.

Comfort	74. Exterior Noise Intrusion	Part 1. Sound Pressure Level	Each regularly occupied space meets the following sound pressure level as measured when the space and adjacent spaces are unoccupied, but within 1 hour of normal business hours: a. Average sound pressure level from outside noise intrusion does not exceed 50 dBA. If sound masking systems are used, sound levels fall within the following range, when measured from the nearest workspace: a. Open workspaces: 45 - 48 dBA. b. Enclosed offices: 40 - 42 dBA.	PRECONDITION	1. The product has $L_{n,w} = 42\text{db}$ according to the standard ISO 10140-3 2. The product has $R_w = 67\text{db}$ according to the standard ISO 10140-2
	79. Internally Generated Noise	Part 1. Sound Masking Limits		OPTIMIZATION	1. The product has $L_{n,w} = 42\text{db}$ according to the standard ISO 10140-3 2. The product has $R_w = 67\text{db}$ according to the standard ISO 10140-2

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