Specification Sheet Rigid Core Luxury Vinyl Flooring

Version: *EU* *Last update:* *1/30/2019*

TECHNICAL SPECIFICATIONS

Bevel	Cut	**UFH**	See IM
Lock	Tight	**Installation**	Floating

Layer	**Thickness (mm)**	**Type**
Top Layer	0.55	Antibacterial, antislip 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/m3	E1
Decret No2011-321	Emissions	ISO 16000	TVOC<1000μg/m3	VOC A+
GreenGuard Gold	Emissions	Spectrometry, chromatography	TVOC≤220μg	GreenGuard Gold Certified
Prop 65	Orthophthalates	Spectrometry	ND	Compliant
CPSIA	Lead	CPSC-CH-E-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
	Curling	ISO 23999	≤1mm	Compliant
	Length tolerance	ISO 24342	≤ 0.1≤% of nominal length up to 0.≤ 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 −0.10mm	Compliant
	Squareness	ISO 24342	≤0.25mm/≤400mm ≤0.35mm/≥400mm	Compliant
	Flatness	ISO 10582 Appendix B	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
	Castor chair	ISO 4918	Slight change only	Suitble for moderate class of use
	Resistance to Heat	ISO 105-B02:2014	≥ Grade 6	Compliant
		ASTM F1515	ΔE ≤8	Compliant
	Locking strength	ISO 10582 Appendix D	1.5 KN/m(only for commercial)	Meet commercial requirements
EN 16511	Wear resistance	EN 13329	Refer to the standard	Pass, Class 33
	Impact resistance	EN 13329 Annex A	Refer to the standard	Pass, Class 34
	Micro scratch	EN 16094	Refer to the standard	Pass, Class 34
	Furniture leg	EN 424	Refer to the standard	Pass, Class 34
	Resistance to staning	EN 438-2	Refer to the standard	Pass, Class 34
	Swelling	ISO 24336	Refer to the standard	Pass, Class 34
	Dimensional variation due to climate	ISO 24339	Refer to the standard	Pass, Class 34
ASTM F3261	Surface Integrity	ASTM F1914	No puncture	Meets commercial requirements
	Residual Indentation	ASTM F1914	≤0.18mm (70lbs/34kg)	Meets commercial requirements
	Static load	ASTM F970/ASTM F387	≤0.13mm	Meets commercial requirements
	Resistance to light	ASTM F1514	ΔE ≤8	Meets commercial requirements
NALFA LF 01-2011	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/m3
	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
		DIN 51130	NA	R10
	Rolling Load	ASTM F2753	NA	NA
	Fire Resistance (CHF)	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 programm for every building. Our products will contribute value to a building's LEED v4 Scorecard in the following LEED certiifcation programm categories recognized by the USGBC as per following

LEED Programme Certifcation	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
		Credit 4: Material ingredient– Option 2	1 point	Minimize the use and generation of harmful substances	The product is 100% REACH compliant
	Material & Resource	Credit 6 – PBT source reduction: lead, cadmium and copper	1 point	To reduce the release of persistent, bioaccumulative, and toxic chemicals	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 repost according to ISO 16000 is available on request. 3. The product is GreenGuard Gold certified.
 Homes	**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.
		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	Prerequiste – Durability management	0 point (Prerequiste)	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**	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)	PRECONDITION	a. Formaldehyde emission are less than 0.05mg/m3. b. The total volatile organic compounds are less than 0.5mg/m3.
	04. VOC Reduction	**1. Interior Paints and Coatings**	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	PRECONDITION	a. The VOC limits for California Air Resources Board (CARB) are less than 0.11ppm. 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
		3. Flooring	The VOC emissions of all newly installed flooring must meet all limits set by the following, as applicable: a. California Department of Public Health (CDPH) Standard Method v1.1-2010.	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**	All newly-installed building materials meet the following materials composition requirements: a. No asbestos. b. Not more than 100 ppm (by weight) added lead.	PRECONDITION	a. No asbestos b. The product contain less than 100 ppm.
		2. Lead Abatement	For repair, renovation or painting on buildings constructed prior to any applicable laws banning or restricting lead paint, lead evaluation and abatement.	PRECONDITION	The product contain less than 90 ppm.
		3. Asbestos Abatement	To reduce hazards in buildings constructed prior to any applicable laws banning or restricting asbestos, the following testing, evaluation and abatement.	PRECONDITION	The product contain less than 90 ppm.
	25. Toxic Material Reduction	**2. Flame Retardant Limitation**	Halogenated flame retardants are limited in the following components to 0.01% (100 ppm) to the extent allowable by local code: a. Window and waterproofing membranes, door and window frames and siding. b. Flooring, ceiling tiles and wall coverings. c. Piping and electrical cables, conduits and junction boxes. d. Sound and thermal insulation. e. Upholstered furniture and furnishings, textiles and fabrics.	OPTIMIZATION	The product don't contain halogenated flame retardants
		3. Phthalate (Plasticizers) Limitation	DEHP, DBP, BBP, DINP, DIDP or DNOP (often found in polyvinyl chloride (PVC)) are limited in the following components to 0.01% (100 ppm): a. Flooring, including resilient and hard surface flooring and carpet. b. Wall coverings, window blinds and shades, shower curtains, furniture and upholstery. c. Plumbing pipes and moisture barriers.	OPTIMIZATION	In accordance with US Consumer Product Safety Improvement Act 2008 (CPSIA) (H.R.4040) Title I, Section 108 & California Proposition 65 & Annex XV II item 51&52 of the REACH Regulation (EC) No. 1907/2006 and amendment No. 552/2009, the product contains less than 100ppm.
		5. Urea-Formaldehyde Restriction	Urea-formaldehyde presence is limited in the following components to 100 ppm: a. Furniture or any composite wood products. b. Laminating adhesives and resins. c. Thermal insulation.	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 mesured 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.	PRECONDITION	1. The product has Ln,w = 42db according to the standard ISO 10140-3 2. The product has Rw = 67db according to the standard ISO 10140-2
	79. Internally Generated Noise	**Part 1. Sound Masking Limits**	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	OPTIMIZATION	1. The product has Ln,w = 42db according to the standard ISO 10140-3 2. The product has Rw = 67db according to the standard ISO 10140-2

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