

norament[®] Technical Data

	Test Method	Requirement/Note	Test Result								
			Tile: 3.5 mm Tread: 5 mm	Tile: 3.5 mm Tread: 5 mm	Tile: 3.2 mm Tread: 4.5 mm	Tile: 2.7 mm Tread: 5 mm	2.7 mm	3.5 mm	3.5 mm	Tile: 4 mm Tread: 4.5 mm	9 mm
			arago, arago nTx arago stairtreads	castello grano, grano nTx pado satura grano stairtreads	825 round 825 round stairtread	hammered hammered stairtread	kivo	grano xp, grano xp nTx satura xp	grano ed	920 920 stairtread	992 992 grano
Rubber Floor Tile	ASTM F1344		Type IB Grade 2	Type IB Grade 2	Type IA Grade 1	Type IA Grade 1	Type IB Grade 2	Type IB Grade 1	Type IB Grade 2	Type IA Grade 1	992: Type IIA 992 grano: Type IIB Grade 2
Resilient Stair Treads	ASTM 2169		Type TS Class 2 Group 1/2 Grade 2	Type TS Class 2 Group 1/2 Grade 2	Type TS Class 2 Group 1/2 Grade 2	Type TS Class 2 Group 1/2 Grade 2	-	-	-	Type TS Class 2 Group 1/2 Grade 1	-
Limited Warranty		Years	15	15	15	15	15	15	15	15	15
nTx Bond Warranty		Years	10	10	-	-	-	10	-	-	-
Conductivity Warranty		Years	-	-	-	-	-	-	10	-	-
Radiant Flux	E648/NFPA 253	≥0.45 watts/sq cm for Class 1 required	Class 1 0.94 nTx: 0.98 Tread: 1.0	Class 1 0.94 nTx: 0.97 Tread: 1.0	Class 1 0.80 Tread: 1.1	Class 1 0.87 Tread: 1.1	Class 1 1.1	Class 1 0.71 nTx: 0.54	Class 1 0.58	Class 1 0.94	Class 1 0.56
Smoke Density	ASTM E662	< 450 required	296/16 nTx: 369/205	296/16 nTx: 346/145	413/367	162/208 Tread: 380/230	231/234 Tread: 380/230	197/36 nTx: 422/201	418/285	272/167	289/373
Tunnel Test	ASTM E84	Flame/Smoke	**	**	**	**	**	**	**	Class A 15/300	**
Surface Burning	CAN/ULC-S102.2		Refer to the nora [®] Guide Specification or contact the nora [®] Technical Department for details.								
Slip Resistance	ASTM D2047	Dry/Wet ≥0.5 required	0.81/0.87	Two-tone: 0.87/0.93 Hammered: 0.99/0.95	0.76/0.85 Tread: 0.85/0.76	0.90/1.0 Tread: 0.99/0.95	0.87/0.93	Hammered: 0.90/1.0 Cubic: 1.04/1.06	1.0/0.90	0.85/0.76	0.93/0.93
Bacteria Resistance	ASTM E2180/ ASTM G21		Resistant to bacteria, fungi, and micro-organism activity								
Latex Allergies	ASTM D6499		Inhibition Elisa, results are below detection level								
Sound Absorption	ASTM E2179	compare ΔIIC values	ΔIIC 18 Tread: **	ΔIIC 18 Tread: **	ΔIIC 16 Tread: **	ΔIIC 16 Tread: **	ΔIIC 13	ΔIIC 14	ΔIIC 15	ΔIIC 18 Tread: **	**
Sound Absorption	ISO 10140-3	compare ΔLw values	ΔLw 10 dB Tread: **	ΔLw 11 dB Tread: **	ΔLw 12 dB Tread: **	ΔLw 9 dB Tread: **	ΔLw 11 dB	**	ΔLw 15 dB	ΔLw 13 dB Tread: **	ΔLw 17 dB
Hardness	ASTM D2240	Shore Type A	82	82	89 Tread: 82	89 Tread: 82	82	89	84	91	77
Static Load Limit	ASTM F970	with 800 lbs/psi ≤0.005 in with 250 lbs required	0.004 Tread: 0.005	0.005	0.004 Tread: 0.005	0.005	0.005	0.002	0.004	0.005	0.004
Rolling Load Limit	ASTM F2753	lbs/psi (1)	850 Tread: -	850 Tread: -	550 Tread: -	550 Tread: -	850	850	850	850 Tread: -	850
Forklift Traffic Allowed			Yes Tread: -	Yes Tread: -	-	-	Yes	Yes	Yes	Yes Tread: -	Yes
Abrasion Resistance	ASTM D3389	H-18 Wheels 1.1 lb load and 1000 cycles ≤0.035 oz (1.0 g) required	0.008 Tread: 0.006	0.002 Tread: 0.006	0.005	0.006	0.002	0.005	0.004	0.007	0.005

Resistance to Chemicals	ASTM F925		Passes	Passes	Passes	Passes	Passes	Passes	Passes	Passes	Passes
Resistance to Oil & Grease	ISO 26987		Passes	Passes	Tile: - Tread: Passes	Tile: - Tread: Passes	Passes	-	Passes	Passes	Passes
Resistance to Heat	ASTM F1514	Avg. $\Delta E \leq 8.0$ required	Easily achieved with all batches and regular maintenance.								
Static Generation	AATCC 134	20% RH	<1000 volts	<1000 volts	<1000 volts	<1000 volts	<1000 volts	<1000 volts	-	<1000 volts	<1000 volts
Static Generation*	ANSI ESD S97.2		-	-	-	-	-	-	<20 volts	-	-
Conductivity	ASTM F150	Ohms	-	-	-	-	-	-	$10^6 < 10^9$	-	-
Thermal Transmission	ASTM C518	R-value	-0.90 Tread: **	-0.90 Tread: **	**	**	**	**	**	**	**
Embodied Carbon (Gadle to Gate)			14.1 kg CO ₂ e/m ³	14.1 kg CO ₂ e/m ³	-	-	14.1 kg CO ₂ e/m ³	-	21.0 kg CO ₂ e/m ³	-	-
Total Recycled Content (Pre Consumer)			-	-	-	-	-	-	-	-	11%
Indoor Air Quality			GREENGUARD Gold Certified; CDPH 01350 compliant								
Disclosure of Environmental Impacts			EPD	EPD	Tile: - Tread: EPD	Tile: - Tread: EPD	EPD	-	EPD	-	-
Disclosure of Product Ingredients			HPD	HPD	Tile: - Tread: HPD	Tile: - Tread: HPD	HPD	HPD	HPD	-	-
Cradle to Cradle Certified®			Silver	Silver	Tile: - Tread: Silver	Tile: - Tread: Silver	Silver	-	-	-	-
Greenhealth Approved			Yes	Yes	Tile: - Tread: Yes	Tile: - Tread: Yes	Yes	-	-	-	-
LEED v4			Refer to the nora® Guide Specification for details.								

(1) Wheel Types: No metal or hard plastic wheels, the shape of the contact surface of wheels must be flat with round edges. The shore hardness must be Type A ≤ 90 .

* Tested with conductive shoes

** Not tested

Note: Exact values may vary due to the test methods and tolerance between batches. The ASTM minimum requirement shall be achieved or exceeded.

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