

# FENIX NTM™ | THIN

FENIX NTM™ is an innovative material created for interior design by Arpa Industriale. It is produced by the simultaneous application of heat (approx. 150 °C) and high specific pressure (> 7 MPa) in order to have a homogeneous non-porous high density product. The core structure of FENIX NTM is composed of paper impregnated with thermosetting resins. Its external surface involves the use of nanotechnology and its decor is obtained through next generation resins developed thanks to Arpa Industriale's research. FENIX NTM is material which stands out for specific features such as: high resistance to scratches and to dry heat, anti-fingerprint, soft touchness, low light reflectivity, thermal healing of microscratches, enhanced anti-bacterial properties. FENIX NTM is suitable for different interior design applications: kitchens, hospitality, healthcare, bathrooms, furniture (tables, bookshelves, partitions, chairs, etc.). FENIX NTM is a registered trademark by Arpa Industriale.

	STANDARD	MULTICOLOR EVOLUTION
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PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	VALUES
<b>SURFACE QUALITY</b>				
Surface quality	EN 438-2.4	Spots, dirt and similar surface defects	mm <sup>2</sup> /m <sup>2</sup>	≤ 1
		Fibres, hair and scratches	mm/m <sup>2</sup>	≤ 10
<b>DIMENSIONAL TOLERANCES</b>				
Dimensional tolerances	EN 438-2.5	Thickness tolerance	mm	0,9 ± 0,10      1,2 ± 0,18
	EN 438-2.6	Length and width	mm	+ 10 / - 0
	EN 438-2.7	Straightness of edges	mm/m	≤ 1,5
	EN 438-2.8	Squareness	mm/m	≤ 1,5
	EN 438-2.9	Flatness (measured on full-size sheet)	mm/m	≤ 60      ≤ 100
<b>GENERAL PROPERTIES</b>				
Resistance to surface wear	EN 438-2.10	Initial Point	Revolutions	≥ 200
		Wear value	Revolutions	≥ 350
Resistance to immersion in boiling water	EN 438-2.12	Appearance	Rating	≥ 4
Resistance to water vapour	EN 438-2.14	Appearance	Rating	≥ 4
Resistance to dry heat (180°C/20')	EN 438-2.16	Appearance	Rating	≥ 4
Resistance to wet heat (100°)	EN 12721:1997	Appearance	Rating	≥ 4
Dimensional stability at high temperatures	EN 438-2.17	Cumulative dimensional change	Longitudinal %	≤ 0,55      ≤ 0,80
		Cumulative dimensional change	Transversal %	≤ 1,05      ≤ 1,40
Resistance to impact with small diameter ball	EN 438-2.20	Spring force	N	≥ 21
Resistance to impact with large diameter ball	EN 438-2.21	Drop height	mm	≥ 800
		Indentation diameter	mm	≤ 8
Resistance to cracking	EN 438-2.23	Appearance	Rating	≥ 4
Resistance to scratching	EN 438-2.25	Appearance	Rating	≥ 4
Resistance to staining	EN 438-2.26	Appearance - Group 1 and 2	Rating	≥ 5
		Appearance - Group 3	Rating	≥ 4
Light fastness (Xenon-arc)	EN 438-2.27	Contrast	Grey scale rating	≥ 4
Resistance to cigarette burns	EN 438-2.30	Appearance	Rating	≥ 3
Surface specular reflectance	ISO 2813	Surface specular reflectance	Gloss unit	indicative values 0,2 at 20°, 1,5 at 60°, 10 at 85°
Electrostatic property	EN 61340-4-1	Surface electrical resistance	Ω	values between 1 x 10 <sup>8</sup> and 1 x 10 <sup>12</sup>
Density	EN ISO 1183	Density	g/cm <sup>3</sup>	≥ 1,35
Resistance to microscratches	EN 16094	Resistance to micro-scratches	Method A	MSR-A2 solid black - MSR-A1 dark printing
			Method B	MSR-B2 solid black - MSR-B1 dark printing
<b>FIRE PERFORMANCES</b>				
Reaction to fire	The Reaction to Fire of FENIX NTM is related to the final composite panel where the laminate of FENIX NTM is bonded to a substrate. The results may be different depending on the substrates, the glue and the bonding techniques applied. The Reaction to Fire testing of the composite panel is under the responsibility of the panel manufacturer. For its own laminates, Arpa has some testing reports available in relation to specific applications and markets. Customers may refer to the Customer Care for information.			
<b>OTHER PROPERTIES</b>				
Acids resistance	SEFA 8-PL-2010 method 8.1	Chemical Spot Test	passing/not passing	passing
Formaldehyde emission	EN 717- 2	Gas analysis	mg/(m <sup>2</sup> x h)	0,2 - 0,4
	EN 13986	Formaldehyde emission rating	rating	E1
Hygiene	NSF	NSF/ANSI 35	passing/not passing	passing
Volatile Organic Chemical Emissions	Greenguard IAQ according to EPA TO-17 and ASTM D 6196 EPA TO-11A and ASTM D 5197	Individual VOCs	TLV	≤ 0,1
		Formaldehyde	ppm	≤ 0,025
		TVOC	mg/m <sup>3</sup>	≤ 0,25
		Total Aldehydes	ppm / ppb	≤ 0,05
		Total Particles	mg/m <sup>3</sup>	≤ 0,05
Contact with food - Overall migration	EN 1186-3	3% acetic acid 24h at 40°C		< 10
	EN 1186-3	50% ethanol 24h at 40°C		< 10
	EN 1186-14	95% ethanol 24h at 40°C	mg/dm <sup>2</sup>	< 10
	EN 1186-14	isooctane 24h at 40°C		< 10
Contact with food - Formaldehyde specific migration	EN 13130-23	3% acetic acid 24h at 40°C	mg/kg	< 15
Evaluation of micro-organisms action	JIS Z 2801	Antimicrobial activity after 24h at 35°C	bacterial viability:	
			- Log reduction	> 2,4
			- reduction %	> 99,9

**Note to laminates with adhesive protective film**  
 The protective films are designed for temporary surface protection against dirt, scratches and tool marks; they are not designed for protection against corrosion, humidity or chemicals. The laminates covered with the protective film shall be stored in a clean, dry place at room temperature (optimum 20°C), avoiding weathering and UV exposure. The protective film shall be removed from the laminate surface within 6 months from the date of delivery from Arpa Industriale. Arpa Industriale cannot be responsible for the misuse of the laminates covered with the protective film, nor for the consequences for non-recommended applications.

**Disclaimer**  
 The Product Technical Sheets provide all the technical information relevant to the performance of the product as tested by Arpa Industriale or certified testing agencies. Arpa Industriale maintains the right to change and alter the product composition and production process and thereby the performance characteristics of the product at all times, as reported to the Arpa Industriale website. Customers and end-users of the product are requested to check for the latest technical information regarding the products performance on the website of Arpa Industriale before application. In any case, Arpa Industriale, in every contractual relationship, will refer only to the technical information published on its website. Arpa Industriale will not assume any liability if the end-user or customer refer to any other technical information of the products.