

# FENIX<sup>NTM</sup><sup>®</sup>

## MATERIAL PROPERTIES DATA SHEET | SOLID

Italian design since 2013

FENIX NTM<sup>®</sup> is a material produced by simultaneous application of heat and pressure, in order to obtain a homogeneous non-porous high density product. The core structure is composed of paper, impregnated with thermosetting resins and where the outer surface is made of a paper substrate. The outer surface is made of a paper substrate treated with next generation acrylic resins applied to the substrate as a multilayer coating and subsequently, cured via an electron beam process.

fenixforinteriors.com  
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PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	BLACK CORE <sup>1</sup>	MATCHED COLOUR CORE <sup>1</sup>
				VALUES	
<b>GENERAL PROPERTIES</b>					
Surface quality	EN 438-2:2019 cl.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	
Dimensional tolerances	EN 438-2:2019 cl.5	Thickness tolerance	mm	4.0 ± 0.30	4.0 ± 0.40
				6.0 ± 0.40	6.0 ± 0.50
	8.0 ± 0.50	8.0 ± 0.70			
	10.0 ± 0.50	10.0 ± 0.70			
	12.0 ± 0.60	12.0 ± 0.80			
EN 438-2:2019 cl.6	Length and width	mm	+ 10 / - 0		
EN 438-2:2019 cl.7	Straightness of edges	mm/m	≤ 1.5		
EN 438-2:2019 cl.8	Squareness	mm/m	≤ 1.5		
EN 438-2:2019 cl.9	Flatness (measured on full-size sheet)	mm/m	4.0 mm: ≤ 8.0 6.0 - 8.0 mm: ≤ 5.0 10.0 - 12.0 mm: ≤ 3.0	4.0 mm: ≤ 12.0 6.0 - 8.0 mm: ≤ 8.0 10.0 - 12.0 mm: ≤ 5.0	
<b>SURFACE PROPERTIES</b>					
Resistance to surface wear	EN 438-2:2019 cl.10	Initial Point	Revolutions	≥ 200	
Resistance to water vapour	EN 438-2:2019 cl.14	Appearance	Rating	5	
Resistance to dry heat (160 °C/20')	EN 438-2:2019 cl.16	Appearance	Rating	5	
Resistance to wet heat (100 °C/20')	EN 438-2:2019 cl.18	Appearance	Rating	5	n.a.
Resistance to scratching	EN 438-2:2019 cl.25	Appearance	Rating	≥ 4	
Resistance to staining	EN 438-2:2019 cl.26	Appearance - Groups 1 and 2	Rating	5	
		Appearance - Group 3	Rating	≥ 4	
Light fastness (Xenon-arc)	EN 438-2:2019 cl.27	Contrast	Grey scale rating	≥ 4 surface	≥ 4 surface ≥ 3 core
Surface specular reflectance	ISO 2813	Surface specular reflectance	Gloss unit	8 + 16 at 85°	
Acids resistance	SEFA 8-PL-2010 method 8.1	Chemical Spot Test	Suitability	Compliant	
<b>PHYSICAL PROPERTIES</b>					
Density	EN ISO 1183	Density	g/cm <sup>3</sup>	≥ 1.35	
Resistance to immersion in boiling water	EN 438-2:2019 cl.12	Mass increase	%	4.0 mm: ≤ 5.0 6.0 ± 12.0 mm: ≤ 2.0	4.0 mm: ≤ 5.0 6.0 ± 12.0 mm: ≤ 3.0
		Thickness increase	%	4.0 mm: ≤ 6.0 6.0 ± 12.0 mm: ≤ 2.0	4.0 mm: ≤ 6.0 6.0 ± 12.0 mm: ≤ 4.0
		Appearance	Rating	5 surface ≥ 4 edge	5 surface ≥ 3 edge
Dimensional stability at high temperatures	EN 438-2:2019 cl.17	Cumulative dimensional change	Longitudinal %	4.0 mm: ≤ 0.4 6.0 ± 12.0 mm: ≤ 0.3	4.0 mm: ≤ 0.6 6.0 ± 12.0 mm: ≤ 0.5
		Cumulative dimensional change	Transversal %	4.0 mm: ≤ 0.8 6.0 ± 12.0 mm: ≤ 0.6	4.0 mm: ≤ 1.0 6.0 ± 12.0 mm: ≤ 0.8
Resistance to impact with large diameter ball	EN 438-2:2019 cl.21	Drop height	mm	4.0 mm: ≥ 1400 6.0 ± 12.0 mm: ≥ 2000	n.a.
		Indentation diameter	mm	4.0 mm: ≤ 8 6.0 ± 12.0 mm: ≤ 7	n.a.
Resistance to crazing	EN 438-2:2019 cl.24	Appearance	Rating	≥ 4	≥ 4 surface ≥ 3 edge
Flexural Modulus	EN ISO 178	Stress	Mpa	≥ 9000	
Flexural strength	EN ISO 178	Stress	Mpa	≥ 80	
Electrostatic property	EN 61340-4-1	Point to point resistance	Ω	1 × 10 <sup>10</sup> ± 1 × 10 <sup>12</sup>	
		Vertical resistance	Ω	1 × 10 <sup>10</sup> ± 1 × 10 <sup>12</sup>	
<b>OTHER PROPERTIES</b>					
<b>ENVIRONMENTAL PROPERTIES</b>					
Formaldehyde emission	EN 13986	Formaldehyde emissions	Rating	E1	
Volatile Organic Chemical Emissions	Greenguard Gold Certification Low Chemical Emission UL 2818	Volatile Organic Chemical emissions	Suitability	Greenguard Gold certified	
<b>FOOD AND HYGIENE PROPERTIES</b>					
Hygiene	NSF/ANSI 35	Suitability for use as work and nonwork surfaces of food service equipment on which direct food contact during normal preparation or holding operations is not intended, expected, or reasonable	Suitability	NSF certified	
Food contact	Regulation EU n° 10/2011 and following amendments	Food Contact Materials performance	Suitability	Compliant - conditions of use reported in the Declaration of conformity	

<sup>1</sup> For the current and up to date FENIX<sup>®</sup> delivery program in North America, visit [www.fenixforinteriors-na.com](http://www.fenixforinteriors-na.com). For the delivery program in the rest of the world, visit [www.fenixforinteriors.com](http://www.fenixforinteriors.com). Please contact your sales representative for more information.

### Note to FENIX sheets with adhesive protective film

The protective film is designed to temporary protect the surface from dust, scratches and marks left by handling equipment; it does not protect from corrosion, dampness or chemical agents. Sheets covered with protective film should be stored in a clean dry atmosphere at room temperature (ideally 20 °C), avoiding exposure to atmospheric agents and UVA rays. The protective film should be removed from the sheets surface after application and before the final item. In case of thick sheets with protective film on both sides, the film should always be removed from both sides at the same time. In any case, the removal should take place within 6 months from the date of shipping by the Manufacturer(s) of the FENIX sheets. The Manufacturer(s) of the FENIX sheets shall not accept liability for improper use of sheets covered with a protective film, nor for any consequences of an incorrect application.

### Disclaimer

The Material Properties Data Sheet provides technical information relevant to the performance of the product as tested by the Manufacturer(s) of FENIX sheets or certified testing body. Any information contained within this document must be verified and tested for suitability by the user for his or her particular purpose or specific application. Consideration needs to be given to local or specific circumstances. The content of this document reflects our knowledge and experience at the time of publication. The newest version of the document replaces all previous versions. We advise that the newest version may contain technical changes that must be taken into account when using the products. The latest version of the document may be consulted on our website [www.fenixforinteriors.com](http://www.fenixforinteriors.com). Customers should always check whether an updated version of the document is available. We have made every effort to ensure the accuracy of the information in this document, but it cannot be held liable for any oversights, inaccuracies or typographical errors. The Manufacturer(s) of FENIX sheets will not assume any liability if the end-user or customer refer to any other technical information of the products.