

MATERIAL PROPERTIES DATA SHEET | SOLID

FENIX NTA[®] is an innovative material created for interior design by Arpa Industriale. A real metal structure gives a unique aesthetic feature. It is produced by the simultaneous application of heat (approx. 150 °C) and high specific pressure (> 7 MPa).

The core structure of FENIX NTA is composed of paper impregnated with thermosetting resins. Its top surface involves the use of nanotechnology and its main performances are obtained through next generation acrylic resins cured by Electron Beam Curing process.

fenixnta.com
Rev01 - E-25-10-2017

				SOLID BLACK CORE	SOLID MATCHED COLOUR CORE
PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	INDICATIVE VALUES	
GENERAL PROPERTIES					
Surface quality	EN 438-2:2016 cl.4	Spots, dirt and similar surface defects	mm ² /m ²	≤ 1	
		Fibres, hair and scratches	mm/m ²	≤ 10	
Dimensional tolerances	EN 438-2:2016 cl.5	Thickness tolerance	mm	4,0 ± 0,40 6,0 ± 0,50 8,0 ± 0,70 10,0 ± 0,70 12,0 ± 0,80	
				EN 438-2:2016 cl.6	Length and width
	EN 438-2:2016 cl.7	Straightness of edges	mm/m	≤ 1,5	
	EN 438-2:2016 cl.8	Squareness	mm/m	≤ 1,5	
	EN 438-2:2016 cl.9	Flatness (measured on full-size sheet)	mm/m	4,0: ≤ 8,0 6,0: ≤ 5,0 8,0: ≤ 5,0 10,0: ≤ 3,0 12,0: ≤ 3,0	
SURFACE PROPERTIES					
Resistance to surface wear	EN 438-2:2016 cl.10	Initial Point	Revolutions	600	
Resistance to water vapour	EN 438-2:2016 cl.14	Appearance	Rating	5	
Resistance to dry heat (160 °C/20')	EN 438-2:2016 cl.16	Appearance	Rating	5	
Resistance to wet heat (100 °C/20')	EN 438-2:2016 par.18	Appearance	Rating	5	
Resistance to scratching	EN 438-2:2016 cl.25	Appearance	Rating	4	
Resistance to staining	EN 438-2:2016 cl.26	Appearance - Group 1 and 2	Rating	5	
		Appearance - Group 3	Rating	5	
Light fastness (Xenon-arc)	EN 438-2:2016 cl.27	Contrast	Grey scale rating	5	
Resistance to microscratches	EN 438-2:2016 cl.30	Method A - gloss change mean value	%	7	
		Metodo B - surface visual assessment	Class	4	
Resistance to cigarette burns	EN 438-2:2005 cl.30	Appearance	Rating	5	
Surface specular reflectance	ISO 2813	Surface specular reflectance	Gloss unit	indicative values 2 at 20°, 4 at 60°, 11 at 85°	
Acids resistance	SEFA 8-PL-2010 method 8.1	Chemical Spot Test	passing/not passing	passed	
PHYSICAL PROPERTIES					
Density	EN ISO 1183	Density	g/cm ³	1,4	
Resistance to immersion in boiling water	EN 438-2:2016 cl.12	Appearance	Surface Core	surface rating 4 no delamination of the core	
		Mass increase	%	4,0 mm: 2,0 6,0 - 8,0 - 10,0 - 12,0 mm: 1,0	
		Thickness increase	%	4,0 mm: 3,0 6,0 - 8,0 - 10,0 - 12,0 mm: 1,0	
Dimensional stability at high temperatures	EN 438-2:2016 cl.17	Cumulative dimensional change	Longitudinal %	4,0 mm: 0,3 6,0 - 8,0 - 10,0 - 12,0 mm: 0,2	
		Cumulative dimensional change	Transversal %	4,0 mm: 0,4 6,0 - 8,0 - 10,0 - 12,0 mm: 0,5	
Resistance to impact with large diameter ball	EN 438-2:2016 cl.21	Drop height	mm	4,0 mm: 1400 6,0 - 8,0 - 10,0 - 12,0 mm: 1800	
		Indentation diameter	mm	4,0 mm: 8 6,0 - 8,0 - 10,0 - 12,0 mm: 7	
Resistance to crazing	EN 438-2:2016 cl.24	Appearance	Rating	5 surface 5 core	
Flexural Modulus	EN ISO 178	Stress	Mpa	9000	
Flexural strength	EN ISO 178	Stress	Mpa	110	
OTHER PROPERTIES					
ENVIRONMENTAL PROPERTIES					
Formaldehyde emission	EN ISO 12460-3 (ex EN717-2)	Gas analysis	mg/(m ² x h)	0,2	
	EN 13986	Formaldehyde emission rating	rating	E1	
Volatile Organic Chemical Emissions	Greenguard Gold Certification Low Chemical Emission UL 2818	Individual VOCs	TLV	≤ 0,01	
		Formaldehyde	ppm	≤ 0,0073	
		Total VOCs	mg/m ³	≤ 0,22	
		Total Aldehydes	ppm	≤ 0,043	
		1-Methyl-2-pyrrolidinone	mg/m ³	≤ 0,16	
FOOD AND HYGIENE PROPERTIES					
Hygiene	NSF	NSF/ANSI 35	passing/not passing	passed	

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.

FENIX NTA panels covered with the protective film shall be stored in a clean, dry place at room temperature (15-22°C), avoiding weathering and UV exposure.

The protective film must be removed from the surface of FENIX NTA after the application and before putting into use the finite element. In any case, the removal must be made within six months from the date of shipment by Arpa Industriale. Arpa Industriale cannot be responsible for the misuse of FENIX NTA covered with the protective film, nor for the consequences for non-recommended applications.

Disclaimer

The Material Properties Data Sheets provide all the technical information relevant to the performance of the product as tested by Arpa Industriale or certified testing agencies.

The company will update the related documentation when these changes take place. Before using the product, customers and end-users must check www.arpaindustriale.com or www.fenixnta.com for the most updated technical information regarding the products' performance. In any case, Arpa Industriale, in every contractual relationship, will refer only to the quantitative "indicative values" stated in the Material Properties Data Sheet and to the technical information published on its websites. Arpa Industriale will not assume any liability if the end-user or customer refer to any other technical information of the products.

MATERIAL PROPERTIES DATA SHEET | THIN

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				0,7 mm	1,2 mm MATCHED COLOUR CORE
PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT	INDICATIVE VALUES	
GENERAL PROPERTIES					
Surface quality	EN 438-2:2016 cl.4	Spots, dirt and similar surface defects	mm ² /m ²	≤ 1	
		Fibres, hair and scratches	mm/m ²	≤ 10	
Dimensional tolerances	EN 438-2:2016 cl.5	Thickness tolerance	mm	0,7 ± 0,15	1,2 ± 0,18
	EN 438-2:2016 cl.6	Length and width	mm	+ 10 / - 0	
	EN 438-2:2016 cl.7	Straightness of edges	mm/m	≤ 1,5	
	EN 438-2:2016 cl.8	Squareness	mm/m	≤ 1,5	
	EN 438-2:2016 cl.9	Flatness (measured on full-size sheet)	mm/m	≤ 100	
SURFACE PROPERTIES					
Resistance to surface wear	EN 438-2:2016 cl.10	Initial Point	Revolutions	600	
Resistance to water vapour	EN 438-2:2016 cl.14	Appearance	Rating	5	
Resistance to dry heat (160 °C/20')	EN 438-2:2016 cl.16	Appearance	Rating	4	
Resistance to wet heat (100 °C/20')	EN 438-2:2016 par.18	Appearance	Rating	5	
Resistance to scratching	EN 438-2:2016 cl.25	Appearance	Rating	4	
Resistance to staining	EN 438-2:2016 cl.26	Appearance - Group 1 and 2	Rating	5	
		Appearance - Group 3	Rating	5	
Light fastness (Xenon-arc)	EN 438-2:2016 cl.27	Contrast	Grey scale rating	5	
Resistance to microscratches	EN 438-2:2016 cl.30	Method A - gloss change mean value	%	7	
		Metodo B - surface visual assessment	Class	4	
Resistance to cigarette burns	EN 438-2:2005 cl.30	Appearance	Rating	5	
Surface specular reflectance	ISO 2813	Surface specular reflectance	Gloss unit	indicative values 2 at 20°, 4 at 60°, 11 at 85°	
Acids resistance	SEFA 8-PL-2010 method 8.1	Chemical Spot Test	passing/not passing	passed	
PHYSICAL PROPERTIES					
Density	EN ISO 1183	Density	g/cm ³	1,6	
Resistance to immersion in boiling water	EN 438-2:2016 cl.12	Appearance	Core	passed, no delamination of the core	
Dimensional stability at high temperatures	EN 438-2:2016 cl.17	Cumulative dimensional change	Longitudinal %	0,08	
		Cumulative dimensional change	Transversal %	0,50	
Resistance to impact with small diameter ball	EN 438-2:2016 cl.20	Spring force	N	23	
Resistance to impact with large diameter ball	EN 438-2:2016 cl.21	Drop height	mm	800	
		Indentation diameter	mm	8	
Resistance to cracking	EN 438-2:2016 cl.23	Appearance	Rating	4	
OTHER PROPERTIES					
ENVIRONMENTAL PROPERTIES					
Formaldehyde emission	EN ISO 12460-3 (ex EN717-2)	Gas analysis	mg/(m ² x h)	0,2	
	EN 13986	Formaldehyde emission rating	rating	E1	
Volatile Organic Chemical Emissions	Greenguard Gold Certification Low Chemical Emission UL 2818	Individual VOCs	TLV	≤ 0,01	
		Formaldehyde	ppm	≤ 0,0073	
		Total VOCs	mg/m ³	≤ 0,22	
		Total Aldehydes	ppm	≤ 0,043	
		1-Methyl-2-pyrrolidinone	mg/m ³	≤ 0,16	
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