

Basic NOCX HDPE Pipe Material Data

NOCX HDPE pipes consist of a black inner and a colored outer surface layer. Both layers are HDPE materials based on the same polymer. Black and colored raw material data are both within the named values.

Our NOCX pipes comply to ASTM D 3350 PE 345444 C / E *

	Requirements		Norm	Unit	Required FIB value	Required PTI value	NOCX Pipe value
	PTI	FIB					
Polymer Data						Min Class 325443	
Density	x		ASTM D 1505	[g/cm ³]	0,941 - 0,955	> 0,940	0,948
Melt Flow	x		ASTM D 1238	[g/10 min]	max 1,0	0,35 –1,4*	0,05 - 0,15
Mechanical Properties							
Elongation at yield stress		x	ASTM D 638	[%]	8		> 8,5
Elongation at break		x	ASTM D 638	[%]	> 700	> 350	> 800
Flexural Modulus	x		ASTM D 790	[MPa]	550 - 1100	> 750	>900
Ball indentation hardness		x	ISO 2039	[N/mm ²]	44 +/-4		46 +/-2
Shore hardness		x	ASTM D 2240	[Shore A]	60		64
Tensile Strength at yield	x		ASTM D 638	[MPa]	21 - 24	> 21	>24
Tensile strength at break		x	ASTM D 638	[MPa]	35		> 36
Impact Strength		x	ASTM D 256	[KJ/cm/cm]	18		> 25
Other Properties							
Hydostatic Design Basis	x		ASTM D 2837	[MPa]	8,6 – 11,0	8,6 –11,03	11,03
ESC	x		ASTM D 1693	[hrs]	> 192	> 600	> 1000

*** Remark**

The PTI 6th edition 2012 requirement for Melt Index according ASTM D 1238 norm tested under conditions 190/2.16 for typical pressure grade materials used for stay cable pipes, classified with values between index 2-3 (0,35 – 1,4) is too low (melt flow values too high). Typical values for such kind of top materials also used for gas and pressure pipes are index 3-4 (>0,15 to max 0,4). We don't know any raw material type which can cover such values by also complying with all other 6 property requirements. We did address this issue to PTI for review and possible change in the next edition. For more details please contact us.