# **Properties of UNIVOLT Flexible Conduits**

Type HFXS, light gauge, class IEC 225/EN 2243, colour grey

## Nominal Sizes, Types and Dimensions

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	I.D.
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(All dimensions in mm)

Туре	HFXS light gauge, 320 N				
Nominal Size	O.D	+/-	I.D		
12	13.0	+0/-0.3	9.4		
16	16.0	+0/-0.3	11.6		
20	20.0	+0/-0.3	14.6		
25	25.0	+0/-0.4	18.7		
32	32.0	+0/-0.4	25.5		
40	40.0	+0/-0.5	33.0		
50	50.0	+0/-0.6	42.7		
63	63.0	+0/-0.7	54.4		

#### Material: PA 6 grey or black, halogenfree acc. to IEC 754-1

## **Typical Properties**

Property	Test Standard	Unit	HFXS
Physical properties			
Specific density	DIN 53479	g/cm <sup>3</sup>	1.16
Modulus of elasticity	DIN 53457	N/mm <sup>2</sup>	2 000
Elongation at break	DIN 53455	%	100
Water absorption	DIN 53495	%	3
Electrical properties			
Dielectric strength	DIN 53481	kV	35 (in dry condition)
Dielectric constant (800Hz)	VDE 0303/4	-	5.8
Firebehaviour acc. to ÖVE	IM/IEC 614	-	non flamepropagating
acc. to IEC	IEC 614	-	non flamepropagating
acc. to European Standard	EN 50086	-	non flamepropagating
Oxygen index	ASTM D 2863	%	35
Thermal properties			
Resistance against high temperatures			
	DIN 53446	°C	105
Resistance against high temperatures	DIN 53446 *)	2° 2°	<u>105</u> 150

The mechanical properties have been determined under laboratory conditions with samples of nominal size 25 mm at an ambient temperature of 20°C and a relative humidity of 50%.

Impact resistance at 20°C	IEC 614	J	>2
Tensile strength of terminating fitting ****)	DIETZEL-	N	300
Flexibility	Standard	-	>500 000 Cycles

"Short term" means, that the conduits keeps is stability (no softening under influence of temperature), but when exposed \*) for longer periods to temperatures above 105°C the material will become brittle (acc. to laboratory tests after 500h at 150°C). This effect can be recognized by a clear change of colour.

This value refers to an impact of 1 J.

\*\*) \*\*\*) This test has been carried out on samples of size 25mm with a length of 10 cm and the necessary force to flatten the sample for 25% of its original O.D. has been recorded.

\*\*\*\*) This figure is valid for nominal size 25mm, the tensile strength of terminating fitting improves with increasing nominal size.

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