



These spiral winding insulation tubes are made of Kapton® and coated with FEP for use in the most demanding applications. It is used where high dielectric strength, mechanical strength and moisture resistance are required despite low wall thicknesses. It is suitable for applications with the harshest environmental conditions and operating temperatures of up to 200 °C. The structure with adhesive-free welding guarantees that only FEP and polyimide are contained in the product.

Kapton® /Teflon® Spiral Winding Insulation Tube, Non-Shrinking, Class (180°C)

Properties

- Spiral winding insulation tube for applications in temperature class H
- Material: Kapton® FN
- Inner diameter from 1.6 mm.
- Wall thicknesses from 0.075
- For applications in temperature class H up to 180 °C.
- The insulating pipes are also available with color coding for differentiation.
- The material is UL

Technical data

Electrical properties					
Wall Kapton® HN	Thickness	0,0127	0,0254	0,0508	0,0508
Wall FEP	[mm]	0,0127	0,0127	0,0127	0,0254
Dielectric strength					
Total	[V]	---	6'300	4'000	11'400
	[V/mil]	4'000	4'200	---	3'800
Dielectric constant		---	3,0	----	3,1
Loss factor		---	0,0014	-	0,0011
Contact resistance					
25°C	[Ω-cm]	1017	1018	7 x 1017	8 x 1017
200°C	[Ω-cm]	---	1014	---	9 x 1013

Physical properties					
Wall Kapton® HN	Thickness [mm]	0,0127	0,0254	0,0508	0,0508
Wall FEP		0,0127	0,0127	0,0127	0,0254
Tension strength (LR)					
25°C	[psi]	15'000	17'000	25'000	17'000
200°C		10'000	11'000	16'000	11'000
Tension for 3% elongation (LR)					
25°C	[psi]	6'000	7'300	10'000	7'300
200°C		5'000	4'000	8'000	4'000
Tension for 5% elongation (LR)					
25°C	[psi]	---	9'000	---	9'000
200°C		---	5'500	---	5'500
Tension elongation (LR)					
25°C	[%]	50	75	80	>80
200°C		---	85	---	---
Tension module (LR)					
25°C	[psi]	---	320'000	---	320'000
200°C		---	173'000	---	173'000
Impact resistance at 25°C					
	[kg/cm]	---	7	---	14
	[kg/mil]	---	4,6	---	4,6
Tensin resistance (Elmendorf)					
	[g]	---	20	---	---
	[g/mil]	7	13,5	12	---
Tension resistance (Graves)					
	[g]	---	650	---	---
	[g/mil]	---	435	---	---
Polymide weight	[%]	40	57	73	57
Weight FEP	[%]	60	43	27	43
Density	[g/cm3]	1,79	1,67	1,57	1,67

Chemical properties				
Wall Kapton® HN	Thickness [mm]	0,0254	0,0508	0,0508
Wall FEP		0,0127	0,0127	0,0254
Moisture absorption at 25°C				
(25°C) 50% Relative humidity [%]		0,8	0,8	0,8
98% Relative humidity [%]		1,7	1,7	1,7
Water vapor permeability	g/(100 in.2) (24 h.	0,57	---	---
	g/(100 in.2) (24 h)/mil	0,85	---	---

Item number:

Example:

IRNKF0100/005/0500

IRNKF = master number

0100 = 1.00 mm diameter

005 = 0.05 mm wall thickness

0500 = 500 mm length