

Convolute Rolled Tube Products – Phenolic Resins, Synthetic Substrates

Phenolic Resins – Synthetic Substrates	
Grade	BT45NPM
Substrate	Kevlar
Color	BK

Inside Diameter		Wall Thickness ^A		Outside Diameter	Maximum
Minimum	Maximum	Minimum	Maximum	Maximum	Length ^B
2.000	2.999	0.125	1.500	7.500	48
3.000	4.874	0.125	2.250	7.500	48
4.875	8.999	0.125	3.000	20.000	48
9.000	23.999	0.156	3.000	30.000	48
24.000	29.999	0.187	3.000	41.500	48
30.000	48.000	0.250	3.000	54.000	48

Convolute Rolled Tube Products – All Resins, Cotton Fabric Substrates

Phenolic Resin - Fine Weave (linen) Cotton Fabric Substrate					
Grade	BT25NPN	BT25HPN	BT25SPN	BT22NPN	BT22ZPN
Resin System	Phenolic				
Color	NA/BK		NA		

Fine Weave (linen) Cotton Fabric Substrate				
Grade	BT25NPP	BT25NPG	BT25NEE	BT25HEE
Resin System	Phenolic – PTFE	Phenolic – Graphite	Epoxy	
Color	NA	BK	NA	

Inside Diameter		Wall Thickness^A		Outside Diameter	Maximum
Minimum^C	Maximum	Minimum^C	Maximum	Maximum	Length^B
0.094	0.186	0.031	0.203	0.500	24
0.187	0.249	0.031	0.218	0.625	36
0.250	0.374	0.031	0.250	0.750	36
0.375	0.624	0.031	1.062	2.500	48
0.625	1.249	0.031	1.562	3.750	48
1.250	2.999	0.031	3.125	7.500	48
3.000	4.874	0.047	2.250	7.500	48
4.875	8.999	0.062	3.500	16.000	48
9.000	23.999	0.094	3.500	31.000	48
24.000	29.999	0.125	3.500	37.000	48
30.000	48.000	0.156	3.500	55.000	48

Medium/Heavy Weave (canvas) Cotton Fabric Substrate								
Grade	BT13NPN	BT13HPN	BT13SPN	BT13NPG	BT12NPN	BT12HPN	BT18NPM	BT18NPA
Resin System	Phenolic			Phenolic – Graphite	Phenolic		Phenolic – MoS2	Alumina
Color	NA			BK	NA		BK	RD

Inside Diameter		Wall Thickness ^A		Outside Diameter	Maximum Length ^B
Minimum	Maximum	Minimum	Maximum	Maximum	
0.500	0.624	0.047	1.000	2.500	48
0.625	1.249	0.047	1.562	3.750	48
1.250	2.999	0.047	3.125	7.500	48
3.000	4.874	0.062	2.250	7.500	48
4.875	8.999	0.062	5.750	20.000	48
9.000	23.999	0.094	5.750	30.000	48
24.000	29.999	0.125	5.750	41.500	48
30.000	48.000	0.156	5.750	58.000	48

I. Special Exceptions – (For tables above)
<p>A. Specifying Inside Diameter and Wall Thickness is not offered in any grade where the outside of the tube is unfinished or requires lathe turning.</p>
<p>B. Supplied at: Random Length = No lengths less than 12" on a 18", 18" on a 24", 30" on a 36" or 42" on a 48" standard length. Non-Trimmed is considered a random length but not trimmed to allow for maximum customer yield. Minimum Length is considered the specified length with plus or minus 1.000" allowance Cut-To-Length is: (Tube must be a finished OD) 6" - 48" cut length with maximum Outside Diameter of 0.250" - 5.000"; Tolerance of ± 0.125" (May cut all – 0.250" or all + 0.250") 12" - 48" cut length with maximum Outside Diameter of 5.001" - 18.000"; Tolerance of ± 0.250" (May cut all – 0.500" or all + 0.500") 18" - 48" cut length with maximum Outside Diameter of 18.001" - 24.000"; Tolerance of ± 0.250" (May cut all – 0.500" or all + 0.500") All grades of micro ID tubing (less than 0.188" ID) are offered as random length only. Maximum Outside Diameter is 36.000" for trimmed length. Maximum Wall for any trimmed tube is 4.0"</p>
<p>C. Additional Restrictions and Restricted Grades: LINEN TABLE IDs 2.000" to 3.000" with Wall Thicknesses less than 0.047" are only offered in BT25NPN, no minimum length.</p>

II. Outside Diameter – Available Finishes		
Outside Diameter		
Minimum	Maximum	Finish
0.156	9.000	Centerless Ground (Standard), As Wound Available
4.875	9.000	Lathe Turned (Non-Standard), Contact Customer Service
9.001	24.000	Lathe Turned (Standard), As Wound Available
24.001	Maximum	As Wound (No Outside Finishing Available)

NOTE: Contact Customer Service for sizes and tolerances not listed. Micro ID Tubing (IDs less than 0.187") is offered in BT22NPN, BT22ZPN. Industrial Standards related to tolerance, finish and workmanship is assumed, unless otherwise specified. Walls greater than 0.500" thick are subject to check marks and/or cracks in the wall.