



**IKEBANA  
ENGINEERING LTD.**  
Heat shrinkable cable accessories

## Heat Shrinkable Medium Wall Low Voltage Tubes Specification Sheet

Sr. No.	Characteristics	Requirement	Frequency	Control Method
	Product Control			
1	Visual	Good and free from defects	100% - daily	Internal
2	Dimensions	As per Dimension Table	5 samples - daily	Internal
3	Concentricity	min 60%	3 samples - daily	Internal
4	Longitudinal Change	±10%	3 samples - daily	Internal
5	Tensile strength	min 12 MPa (N/mm <sup>2</sup> )	5 samples-routine	ASTM D 638
6	Ultimate elongation	min 200%	5 samples-routine	ASTM D 638
7	Heat Shock (200°C, 30 mins)	No splitting, cracking or flowing	Qualification	ASTM D 2671
8	Dielectric strength	min 10 kV/mm	Qualification	IEC - 243
9	Tensile strength after thermal ageing (158°C, 168 hrs)	min 10 MPa (N/mm <sup>2</sup> )	Qualification	ASTM D 2671
10	Ultimate elongation after thermal ageing (158°C, 168 hrs)	min 100%	Qualification	ASTM D 2671
11	Volume resistivity	min 10 <sup>12</sup> ohm.cm	Qualification	IEC - 93
12	Secant modulus	max 123 MPa	Qualification	ESI 09-11
13	Water absorption	max 1%	Qualification	ISO - 62
	<b>Raw Material Control</b>			
14	Carbon black content	min 2.5%	Compounding	BS 2782 Meth.-452 B : 1978
		<b>Frequency</b>	<b>Agency</b>	
	<b>Daily</b>	- Routine test during production	In-house	
	<b>Qualification</b>	- Whichever is earlier of the following	External and In-house	
		a. At the time of introduction of new product		
		b. After a significant change in formulation		
		c. Every three years		
	<b>Compounding</b>	- For compounding of every batch of material.	In-house	