



**END CAP SPECIFICATION SHEET**

	Characteristics	Requirement	Frequency	Control Method
	Product Control			
1	Visual	Good and free from defects	100% - daily	Internal
2	Dimensions	As per Engineering Drawing	5 samples - daily	Internal
3	Tensile strength	min 12 MPa (N/mm <sup>2</sup> )	5 samples - daily	ASTM D 638
4	Ultimate elongation	min 300%	5 samples - daily	ASTM D 638
5	Environmental: 7 days outdoor at 15 psi	No leakage at 15 psi	1 instal - daily	Internal
6	Air Pressure Test : 30 psi for 4 hours	No leakage	1 instal - daily	Internal
7	Hardness	min 45 Shore D	Daily	ASTM D 2240
8	Tensile Strength after thermal ageing (150°C, 168 hrs)	min 10 MPa (N/mm <sup>2</sup> )	Qualification	ISO - 188
9	Ultimate elongation after thermal ageing (150°C, 168 hrs)	min 250%	Qualification	ISO - 188
10	Heat Shock (225°C, 4 hrs)	no splitting, cracking, dripping or flowing	Qualification	ESI 09-11
11	Environmental Cycling - 8 cycles 6 hours at 60°C, 6 hours at -10°C. pressurized at 10 psi	No leakage at 10 psi	Qualification	Internal
12	Water absorption	max 1 %	Qualification	ISO 62
13	Dielectric Strength	min 12 kV/mm	Qualification	IEC 60243
14	Volume Resistivity	min 10 <sup>12</sup> ohm.cm	Qualification	IEC 60093
<b>Raw Material Control</b>				
15	Carbon Black Content	min 2.5%	Compounding	BS 2782 Meth.-452 B : 1978
16	Tensile strength	min 12 MPa (N/mm <sup>2</sup> )	Compounding	ASTM D 638
17	Ultimate Elongation	min 300%	Compounding	ASTM D 638
18	Hardness	min 45 Shore D	Compounding	ASTM D 2240
		<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 or 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