

# INSULATION AND JACKET MATERIAL CHARACTERISTICS

Material	Abbreviation	Heat resistance/ cold flexibility	Flame retardance	Tensile strength lbf (psi)/in <sup>2</sup> N/mm <sup>2</sup> ***	Elongation %	Abrasion resistance	Dielectric constant at 800 Hz	Specific resistance  Ωxcm	Breakdown voltage  V/mil kV/mm	Radiation resistance  cJ/kg
PVC special	Y	+5/+70 °C	good	2175 15	250	moderate	4.0	10 <sup>13</sup>	305 12	8 x 10 <sup>7</sup>
PVC cold resistant	Y K	-20/+70 °C	good	2175 15	250	moderate	4.0	10 <sup>13</sup>	305 12	8 x 10 <sup>7</sup>
PVC heat resistant	Y W	+5/+105 °C	good	2610 18	200	moderate	3.5	10 <sup>13</sup>	455 18	8 x 10 <sup>7</sup>
PVC oil resistant	YOE	+5/+70 °C	good	2175 15	250	moderate	4.0	10 <sup>13</sup>	305 12	8 x 10 <sup>7</sup>
PUR halogen free	11 Y	-40/+90 °C	moderate	4350 30	400	very good	6.0	10 <sup>12</sup>	505 20	5 x 10 <sup>7</sup>
PE	2 Y	-40/+90 °C	moderate	1015 20	500	good	2.4	10 <sup>17</sup>	2500 100	7 x 10 <sup>6</sup>
TPE	12 Y	-40/+70 °C (up to +135 °C)	moderate	2900 30	500	good	3.3	10 <sup>14</sup>	760 30	1 x 10 <sup>7</sup>
Silicone	2 G	+180 °C	good	1015 7	200	moderate	3.2	10 <sup>15</sup>	505 20	2 x 10 <sup>7</sup>
FEP	6 Y	+180 °C	very good	2900 20	250	good	2.1	10 <sup>18</sup>	505 20	1 x 10 <sup>7</sup>
PFA	-	+250 °C	very good	2900 20	250	good	2.1	10 <sup>18</sup>	505 20	5 x 10 <sup>6</sup>
Tefzel® - ETFE	7 Y	+150 °C	very good	6525 45	250	good	2.6	10 <sup>16</sup>	760 30	2 x 10 <sup>8</sup>
Begum	HM2	+5/+70 °C	good	1300 9	125	moderate	3.7	10 <sup>14</sup>	635 25	-
SABIX® 336	-	-40/+90 °C	moderate	1740 12	500	good	2.6	10 <sup>18</sup>	480 19	5 x 10 <sup>6</sup>
SABIX® 322	-	-40/+90 °C	moderate	1300 9	500	good	2.6	10 <sup>18</sup>	480 19	5 x 10 <sup>6</sup>
SABIX® 230 FRNC	-	-40/+85 °C	very good	1450 10	150	moderate	3.7	10 <sup>14</sup>	635 25	-

The values in this table are subject to change.

\*\*\* 1N/mm<sup>2</sup> = 145.038 lbf (psi)/in<sup>2</sup>  
1mm = 39.37 mil = 0.03937 inch