

Compound PVC 85-A-001TP

Modified lead-free thermoplastic compound based on polyvinylchloride polymer for automotive wire insulation applications for 85 C (185 F) continuous operating temperature.

Compound properties

The PVC 85-A-001TP compound is a high grade lead-free PVC based compound, offering an excellent combination of mechanical, electrical and abrasion resistant properties. The superb extrudability makes this thermoplastic compound an ideal choice for the insulation of automotive wires for both 85 Celsius (185 F) wires for all major car manufacturers.

The compound has been developed to meet all stringent specifications of the automotive industry in Europe, Asia and USA can meet specifications such as ISO 6722 Class A, LV 112 Class A SAE J1127, SAE J1128 and other specifications from companies like FORD, Chrysler, PSA for 85 Celsius (185 F) wires.

Properties <i>(measured on a 0.5 mm² wire, 0.5 mm insulation thickness)</i>	Test Method	(Minimum) value
Physical properties		
Tensile strength (v = 50 mm/min)	IEC 811-1-1	> 15 MPa
Elongation at break (v = 50 mm/min)	IEC 811-1-1	> 150%
Abrasion resistance (abrasive tape)	SAE J1128//ISO 6722/LV 112	Pass (> 500 mm)
Abrasion resistance (scrape abrasion)	ISO 6722	> 300 cycles
Thermal properties		
Withstand voltage after cold bend test (4 hr at -40 C)	ISO 6722 / LV 112	No dielec. breakdown
Withstand voltage after cold impact (4 hr at -25 C)	ISO 6722 / LV 112	No dielec. breakdown
Heat shock/Thermal overload (6 hr, 135 C)	ISO 6722 / LV 112	No dielec. breakdown
Heat ageing (10 days at 110 C)	ISO 6722 / LV 112	No dielec. breakdown
Heat-resistance (3000 hrs, 85 C)	ISO 6722 / LV 112	No dielec. breakdown
Shrinkage (15 minutes 150 C)	ISO 6722/LV 112	< 2 %

Electrical properties		
Insulator resistance (1 hr 70 C/100 V/1 min)	ISO 6722 / LV 112	> 10@10 ohm.cm
Withstand voltage (1 kV, 1 minute)		Pass
Withstand voltage (5 kV, 0,15 seconds)		Pass
Fluid resistance		
Voltage withstand after immersion in OIL #1 , JIS K 6301 (20 hrs @ 50 C)	JASO D 611-94	Pass
Burning properties		
Flame resistance	ISO 6722 / LV 112	Pass
Limited oxygen index	ASTM D-2863	23%

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