

# Compound PVC 105-A-001TP

Modified lead-free thermoplastic compound based on polyvinylchloride polymer for automotive wire insulation applications for 85 C (185 F) and 105 C (221 F) continuous operating temperature.

## Compound properties

The PVC 105-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) and 105 Celsius (221 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 and B, LV 112 Class A and B, JASO D 611-94, SAE J1127, SAE J1128 and other specifications from FORD, Chrysler, PSA, Renault for 105 Celsius (221 F) wires.

Properties <i>(measured on a 0.5 mm<sup>2</sup> wire, 0.5 mm insulation thickness)</i>	Test Method	(Minimum) value
<b>Physical properties</b>		
Density	ISO 1183	1,34
Tensile strength (v = 50 mm/min)	IEC 811-1-1	> 17 MPa
Elongation at break (v = 50 mm/min)	IEC 811-1-1	> 150%
Abrasion resistance (abrasive tape)	SAE J1128/JASO 611-94/ISO 6722	Pass (> 500 mm)
Abrasion resistance (scrape abrasion)	ISO 6722	> 300 cycles
<b>Thermal properties</b>		
Withstand voltage after cold bend test (4 hr at -40 C)	ISO 6722 / LV 112/JASO D 611-94	No dielec. breakdown
Withstand voltage after cold impact (4 hr at -15 C; 100 gram weight)	ISO 6722 / LV 112	No dielec. breakdown
Heat shock/Thermal overload (6 hr, 150 C)	ISO 6722 / LV 112	No dielec. breakdown
Heat ageing (10 days at 130 C)	ISO 6722 / LV 112	No dielec. breakdown
Heat-resistance (120 hours at 120 C)	JASO D 611-94	No dielec. breakdown
Heat-resistance (3000 hrs, 105 C)	ISO 6722 / LV 112/	No dielec. breakdown
Shrinkage (15 minutes 150 C)		< 2 %
<b>Electrical properties</b>		
Insulator resistance (1 hr 70 C/100 V/1 min)	ISO 6722 / LV 112	> 10@10 ohm.cm
Withstand voltage (1 kV, 1 minute)	JASO D 611-94	Pass
Withstand voltage (5 kV, 0,15 seconds)	JASO D 611-94	Pass
<b>Oil resistance</b>		
Voltage withstand after immersion in OIL #1 , JIS K 6301 (20 hrs @ 50 C)	JASO D 611-94	Pass
<b>Burning properties</b>		
Horizontal burning test	ISO 6722 / LV 112/JASO D 611-94	< 15 sec
Limited oxygen index	ASTM D-2863	24%

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