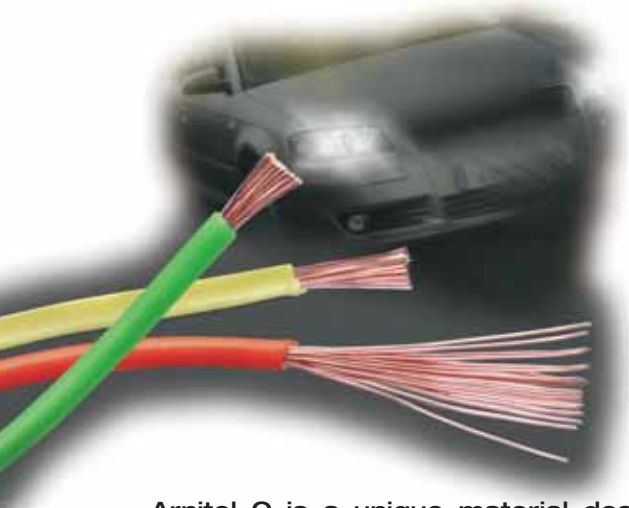


ARNITEL® C



New Arnitel Technology Raises Temperature and Hydrolysis Resistance to Higher Levels

Arnitel C is a unique material designed for wire, cable and tube applications with the following properties:

- Best high heat aging properties of all TPC (thermoplastic copolyester) (Continuous Use Temperature 3000 hrs at 175°C)
- Good hydrolysis resistance (>150 days at 85°C in water)
- Halogen free flame retardant
- Excellent mechanical properties
- Good electrical properties
- Excellent flexural fatigues endurance
- Good chemical resistance
- Perfect adhesion with overmolding of PBT and PA
- Ultrathin wall possible due to excellent abrasion resistance

Arnitel C is designed for wire and cable applications. It can also be used in other extrusion applications where excellent heat resistance, flexibility and hydrolysis resistance are required e.g. cable harness components, convoluted tubes and fuel tubes. Arnitel C is available in natural and flame retardant grades.

Key Property Data

Property	CM551	CM600-V	CM622
Flame Retardant / Halogen Free - or FR or FR-HF	-	FR-HF	-
Melt Volume Flow Rate (cm ³ /10min ISO 1133 @230°C and load 2.16 kg	8	9	9
Hardness (ShoreD) ISO 868	52	61	60
Density (kg/m ³) ISO 1183	1240	1320	1250
Melting Temperature AD 507 (10°C/min; 2 nd heating	205	205	210

Unique Properties

- Arnitel C has a continuous use temperature (CUT) of 175°C for 3000 hrs (exceeding T4 segment).
- Arnitel C is hydrolysis resistant.
- Arnitel C has excellent fatigue and abrasion resistance that offers two levels of protection: first, to withstand extreme bending during installation, and secondly to withstand continuous vibration and movement during operation even in ultrathin wall.
- Arnitel C is easier to process and has a better cost/performance relationship compared to fluorelastomers like ETFE.
- Perfect adhesion to overmolded connectors of PBT and PA unlike cables coated with ETFE or XPE.

Safety Health and Environment

- Arnitel C uses non halogen flame retardants
 - Low smoke toxicity compared to brominated systems or ETFE and PVC.
 - Waste is not harmful to the environment compared to ETFE and PVC.
- Arnitel C is a thermoplastic material and thus recyclable
 - Lower waste rates, regrind is possible compared to crosslinked products.
 - Recycling after lifecycle in car is possible compared to crosslinked products.
- Arnitel C is a thermoplastic elastomer and needs no plasticizers, unlike plasticized PA11, PA12 and PVC. Plasticizers suspected of endangering health and environment like phthalates are not used.

Meeting Automotive Cable Standards

Arnitel C (CM600-V) meets ISO 6722 and LV112 test standards for wire and cable at the following levels:

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ Heat aging
Exceeds class D ISO 6722 <ul style="list-style-type: none"> - 3000 hrs at 150°C - 240 hrs at 175°C - 6 hrs at 200°C ■ Hydrolysis
Test on tensile bars submerged in water <ul style="list-style-type: none"> - Test on 0,35mm² cable - 150 days at 85°C | <ul style="list-style-type: none"> ■ Flammability
UL94 V2
ISO 6722 <ul style="list-style-type: none"> - according to UL-test on tensile bars - 45° burning test on 0,35 mm² cable - Low toxicity of smoke and halogen free flame retardant. ■ Mechanical tests <ul style="list-style-type: none"> - pressure test at high temperature - cold winding test - abrasion ■ Chemical resistance
LV112 <ul style="list-style-type: none"> - compatibility to tapes and automotive fluids |
|--|---|

Figure 1 Arrhenius plot thermo-oxidative aging Arnitel C

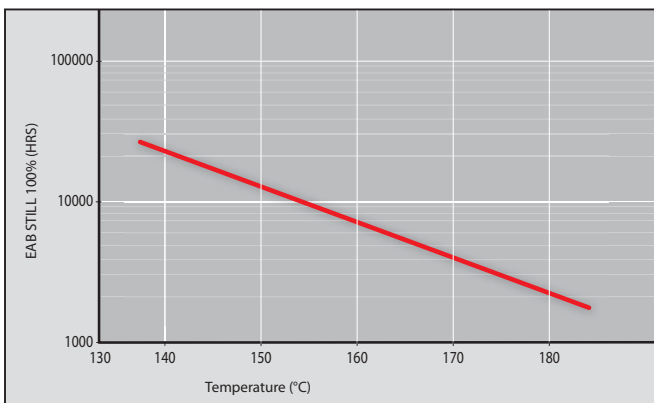
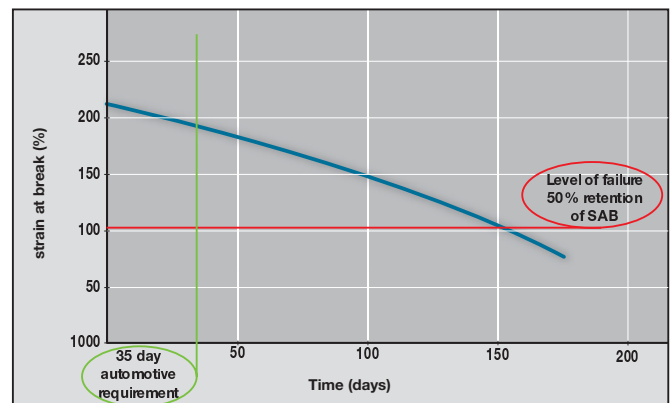


Figure 2 Relation strain at break Arnitel C hydrolytic test at 85°C



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