



Fluon® ETFE C88AXMP-HT

Resins for Improved Stress Crack Resistance and Thermal Stability

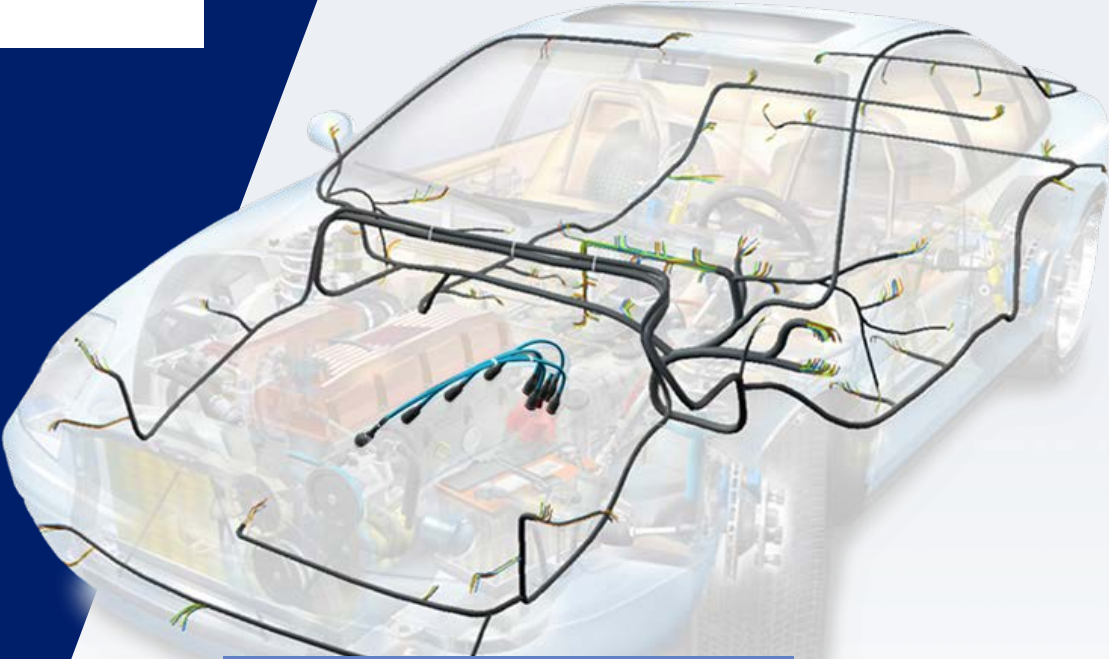
Your Dreams, Our Challenge

Reinventing ETFE Resins

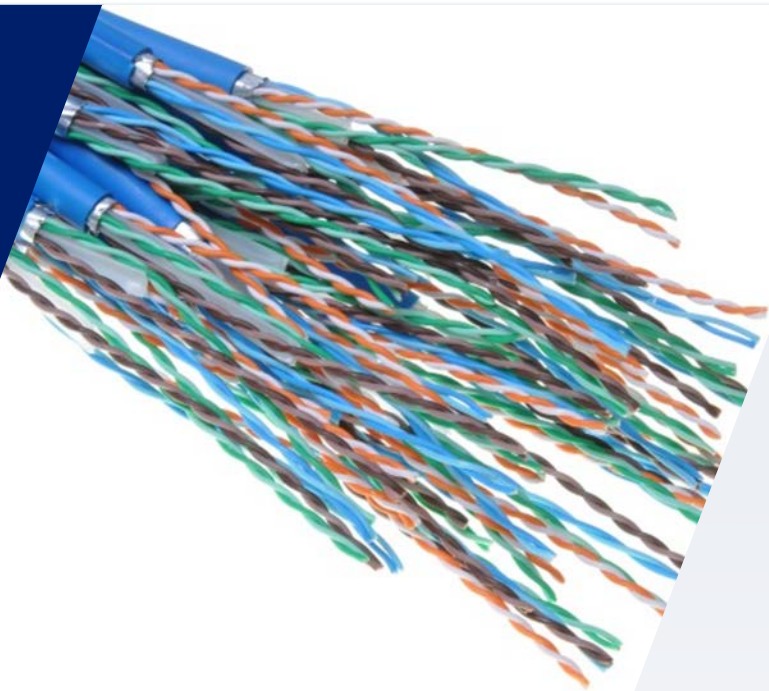
- Benefits of Fluon ETFE
- What is C88AXMP-HT?
- Independent Testing
- Comparison to Standard
- Current and Potential Applications
- Color Concentrates
- Commercial Status

Benefits of Fluon ETFE Resins



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- A 3D cutaway illustration of a car chassis, showing the internal components like the engine, transmission, and various mechanical parts. A complex network of black and blue wires is overlaid on the chassis, representing the vehicle's electrical system. The wires are connected to various points on the engine, transmission, and throughout the car's body.
- Engine Wiring
 - Transmission Wiring
 - Under-hood Wiring
 - Fiber Optic Cables

- Excellent chemical and thermal resistance
- Low flame characteristics
- Outstanding weatherability
- Good mechanical and tear strength



What is C88AXMP-HT?

- Fluon ETFE has been used in automotive cables for many years
- New LV112 Specification (German OEM standard) increased test temperature
- HT developed to match new requirement
- High MFR for high line speed and greater efficiency
- Improved stress crack
- Improved flex fatigue
- 26,500 cycles (standard ETFE = 16,400)
- Performance confirmed by independent laboratory, EDAG



Independent Testing – EDAG

All thermal related tests to LV112 Temperature Class E & F protocols

- Cable sizes to cover full range of typical auto cables
- 3000 hours at 200 °C
- Thermal overload : 250 °C for 6 hours
- Short-term heat aging : 225 °C for 240 hours
- Stress crack at 220 °C
- Low-temp bending at -40 °C
- Insulation shrink-back under heating

EDAG Results

	Cable Size (mm ²)					
Test	0.35	0.5	0.75	2.5	4	10
Stress Test 225 °C	Pass	Pass	Pass	Pass	Pass	Pass
Thermal Overload 250 °C	Pass	Pass	Pass	Pass	Pass	Pass
Short-Term Age 240 Hrs	Pass	Pass	Pass	Pass	Pass	Pass
Long-Term Heat Age 3000 Hrs	Pass	Pass	Pass	Pass	Pass	Pass
Cold Winding -40 °C	Pass	Pass	Pass	Pass	Pass	Pass
Insulation Shrinkage Under Heat	Pass	Pass	Pass	Pass	Pass	Pass

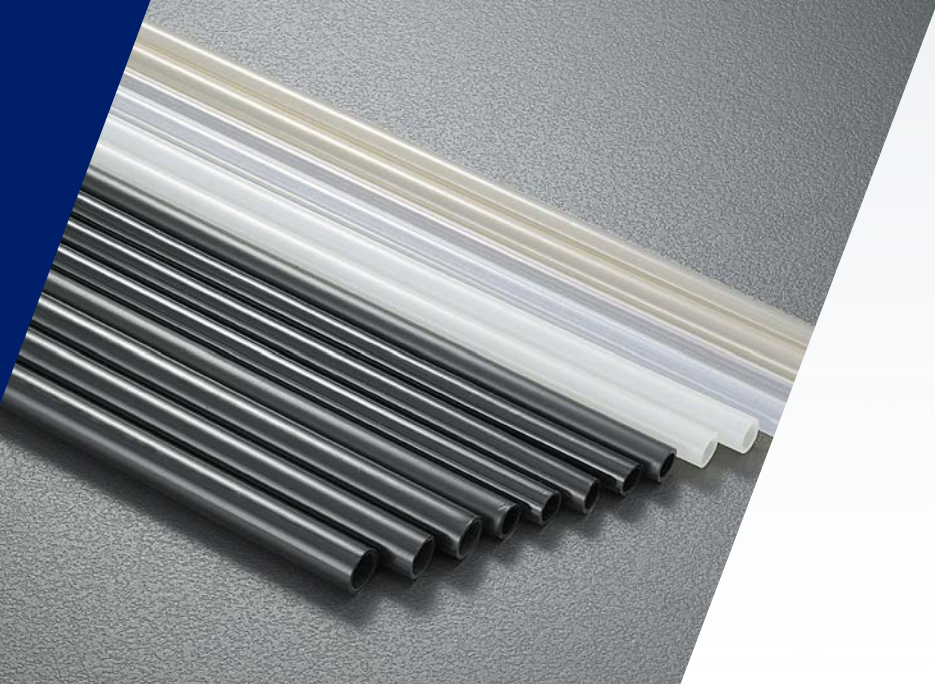
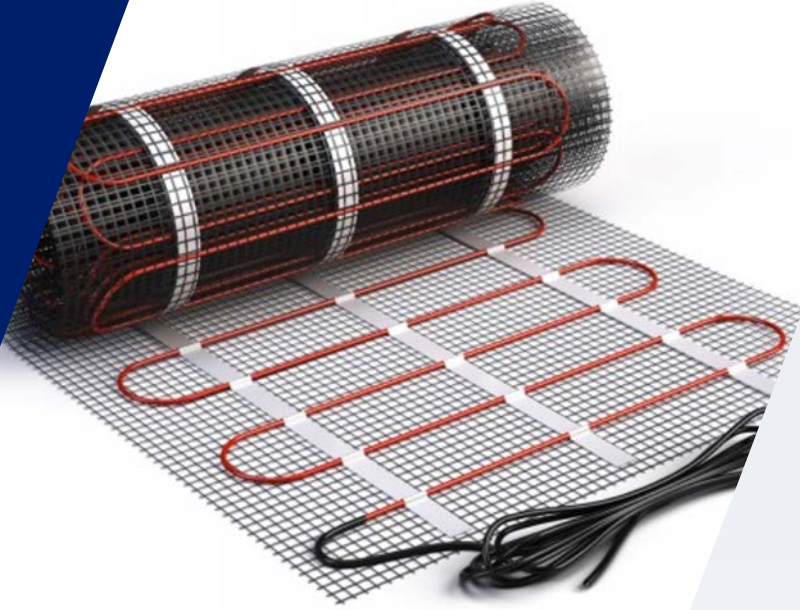
Comparison of Standard ETFE vs. HT

Property	Standard ETFE	HT ETFE
MFR (g/10 min)	24–43	23–35
Melting Point (°C)	260	254
Density	1.74	1.74
Tensile Strength (mPa)	52	52
Tensile Elongation (%)	495	550
Abrasion (cycles)	18,000	17,000
MIT (cycles)	16,400	26,500

HT Color Concentrates

- Full range of colors based on HT grade made by AGC
- Improved thermal stability helps compounding process
- Shows improved performance when used alongside HT*

** When compared with standard ETFE color concentrates*



Current and Potential Applications

- Automotive wire & cable
- Ultrathin lightweight wiring (FLUR)
- Industrial wire & cable
- Underfloor heating cables
- New developments
- Compounding (antistatic)
- Fuel hose



Commercial Status of C88AXMP-HT

- Samples available
- Customer approvals obtained
- Commercial launch in March 2016

Your Dreams, Our Challenge



AGC Chemicals Americas, Inc.

- Intelligent Resins
- Custom Compounds
- Smart Chemistry Solutions

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