



Fluon+™ Reinforced Compounds Optimized for Harsh Conditions

AGC Chemicals Americas, Inc.



AGC

Introduction to Melt Processable Compounds



Your Dreams, Our Challenge

Why Fluoropolymer Compounds?



- Fluoropolymer resins impart unique characteristics.
- Performance is further increased by the use of various fillers.
- AGC offers filled PTFE compounds and melt processable compounds.

Product Groups

Concentrates

- Color
- Foam
- Laser mark

Ready-to-Use

- Cross-link compounds
- Reinforced compounds
- Conductive compounds
- Lubricated compounds

Modified

- Flexible compounds
- Adhesive compounds
- Modified PEEK and PPS

Re-Inventing ETFE: Stress Crack Improvement

- Aimed at automotive standard LV112 (Class F)
- C-88AXM-HT is almost 20% *less dense* than FEP
- Performs well at temperatures up to 200 °C
- Full range of color concentrates available

	C-88AXM-HT ETFE	Standard ETFE
5% weight loss	395 °C	380 °C
10% weight loss	405 °C	390 °C
MIT (no. cycles)	26,500	16,400
Tensile Elongation (%)	550	496
Tensile Strength (Mpa)	52	52
Stress Crack T*	220 °C	185 °C

Reinventing ETFE: Stress Crack Improvement

Standard ETFE



Ultra Heat Resistant C-88AXM-HT ETFE

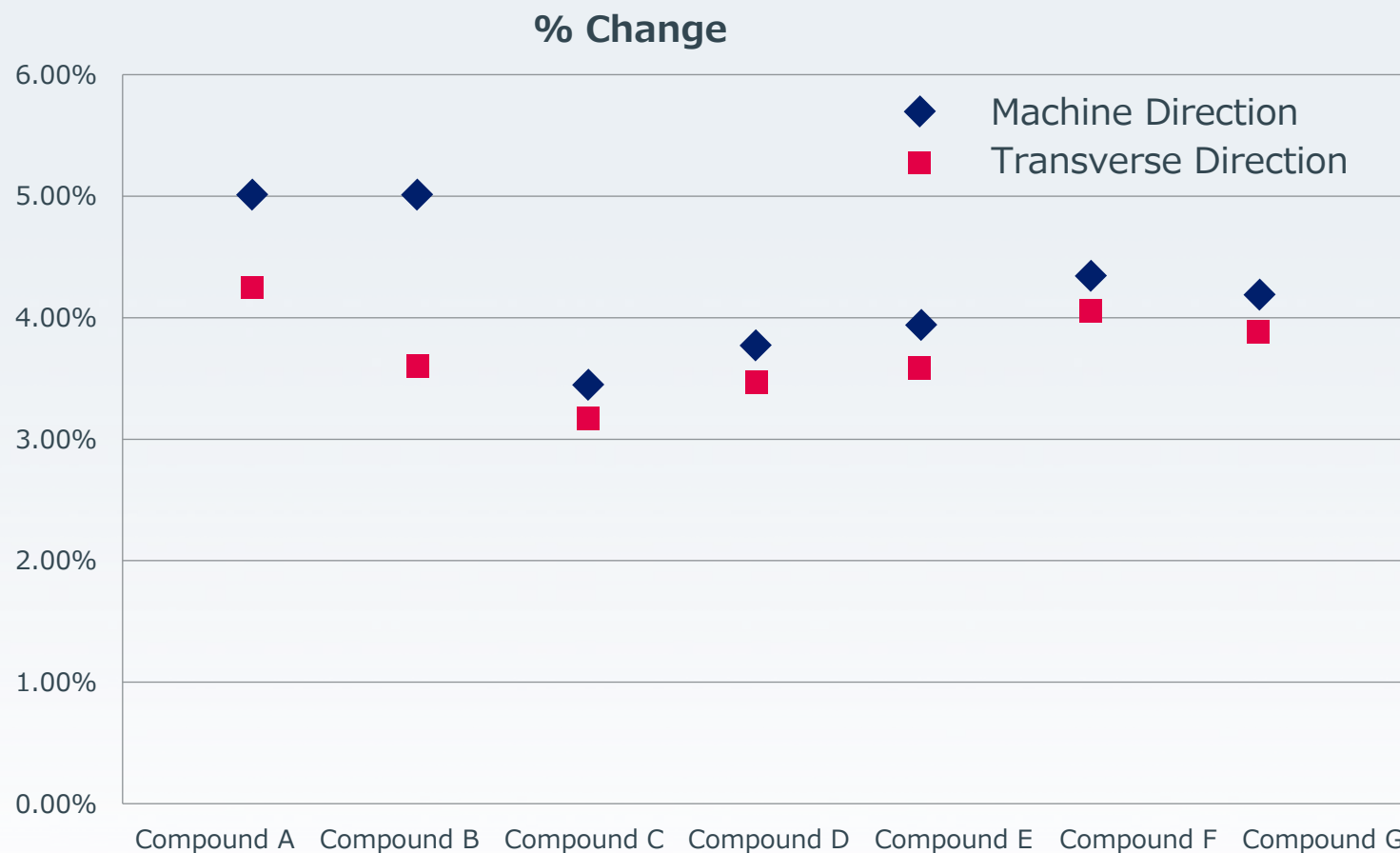


Procedure:

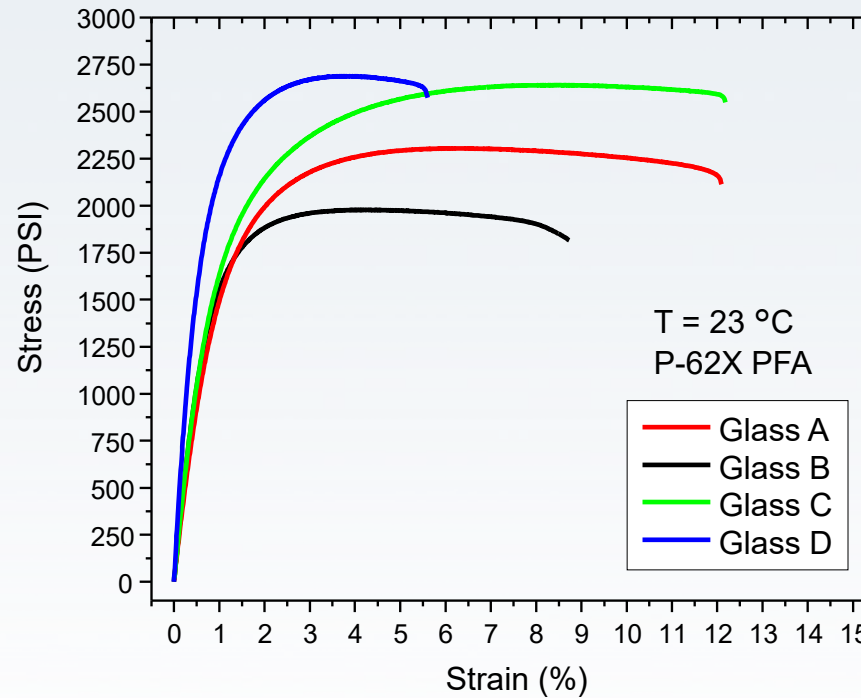
- Pre-aged 3 hours @ 225 °C before coiling
- 6 hours @ 225 °C after coiling

Shrink Reduction in PFA

Shrinkage (%)



Glass-Reinforced Compounds

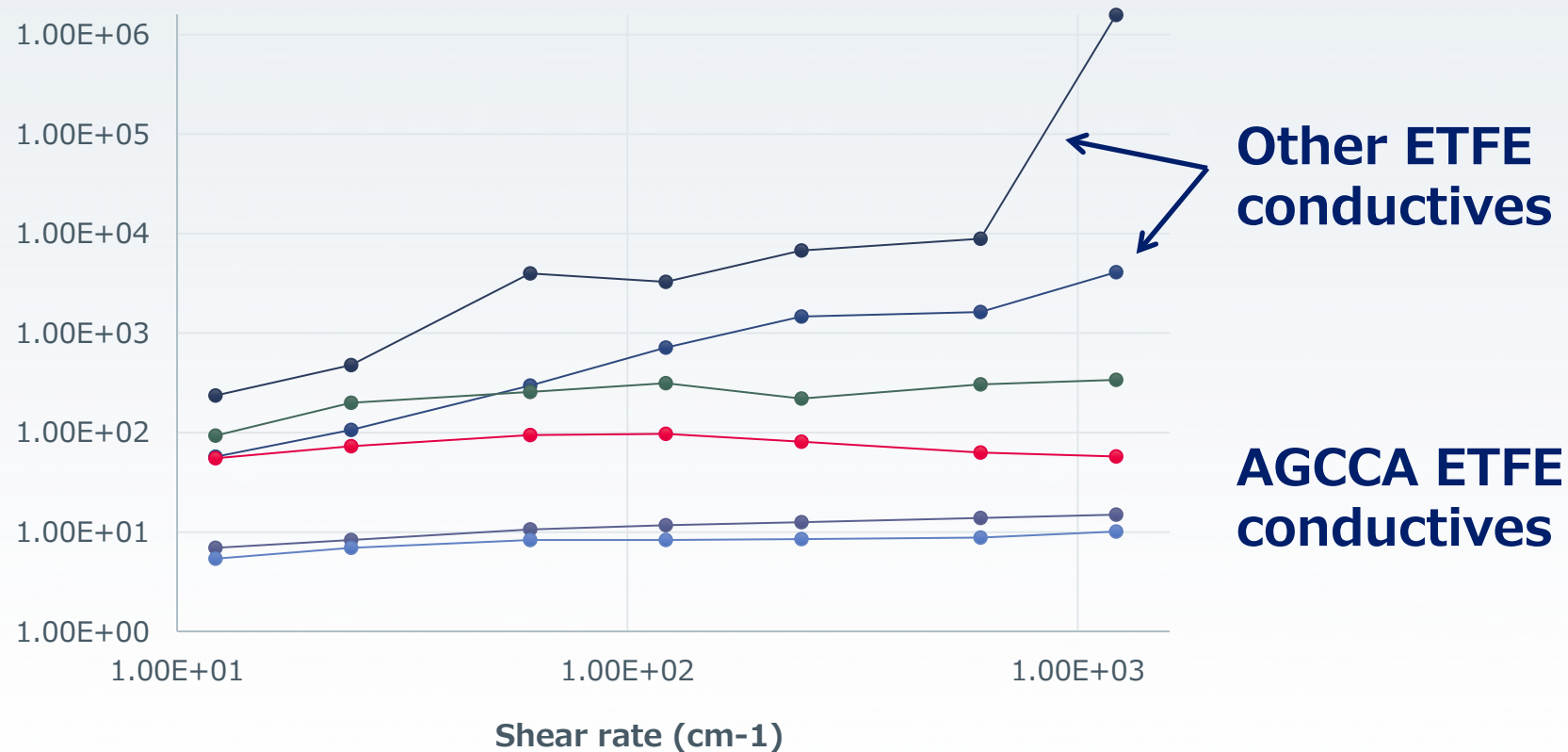


Not all glass is equal

- Chopped vs. milled
- Treated vs. untreated fibers
- Type of fiber treatment
- Performance at elevated temperatures

Conductive & Anti-Static Compounds

- Extremely stable conductivity
- Resistant to shear process
- Minimized losses over time



Downhole Cable Applications

- 25,000 ft depth
- 15,000 psi
- Ultra smooth outer surface
- Abrasion resistance
- Torsion and tension
- Extreme temperature cycling
- Bending fatigue

A detailed cross-sectional diagram of a downhole cable. The cable is shown in a perspective view, revealing its internal structure. At the center is a bundle of copper conductors. Surrounding them is a thick, orange-colored fluoropolymer insulator. Below the insulator is a layer of inner armor, depicted as a series of small, dark, cylindrical elements. This is followed by an inner fluoropolymer jacket, shown as a thin, light-colored layer. The next layer is the outer armor, consisting of a thicker, braided metal structure. The final layer is a carbon-filled fluoropolymer jacket, which is the outermost, dark-colored layer. Arrows point from each label to its corresponding layer in the cable cross-section.

Conductor

Fluoropolymer Insulator

Inner Armor

Inner Fluoropolymer Jacket

Outer Armor

Carbon Filled Fluoropolymer Jacket



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**Contact Us
for more
Information**



Learn more
www.agcchem.com
610-423-4300 800-424-7833

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