

Alternative Solutions to THV for High-Performance Applications

AGC can offer alternative resins for users of THV. Our material science solutions can fill the void when performance matters in critical applications.

Fluon® LM-ETFE resins are chemically resistant and melt processable with low melting temperature options similar to THV. Fluon+™ Flexible Compounds are enhanced for flexibility and elongation above that of neat ETFE. The compounds can be cross-linked by electron beam or other high-energy radiation sources to add additional durability and long term performance.

Features

- Chemically resistant
- Wide service temperature range (up to 200 °C)
- Can be custom-tailored to meet individual applications in wire and cable

Fluon+ Flexible Compounds

Grade	AR-3300N	AR-3300P	AR-3300XL	AR-3300LH
Recommended Use	General purpose	V-0 UL rated for flame retardancy	Radiation curable (for extended life)	Enhanced adhesion to metals and other plastics
MFR 297 °C 5 kg (g/10 min)	9.0	8.0	9.0	9.0
Service Temperature	150 °C	150 °C	200 °C (after cure)	150 °C

Applications

- Applications requiring good flexibility, temperature & chemical resistance
- Wire and cable insulation
- Tubing
- Film



Comparison Chart

Fluon+ Flexible Compounds versus Fluon LM-ETFE and THV Resins

Material	THV	LM-ETFE	Fluon+ Flexible
Specific Gravity	1.93~2.06	1.78	1.62~1.64
Tensile Strength	Moderate to High	High	Moderate to High
Tensile Elongation	High	Moderate	High
Flexibility	Moderate to High	Moderate	High
Flammability UL 94	V-0	V-0	V-2 to V-0
Appearance	Transparent	Transparent	Opaque

Flexibility

Flexibility is similar to THV. Flexible Compounds are nearly as flexible as fluoroelastomers, but can be processed by conventional melt processable methods.

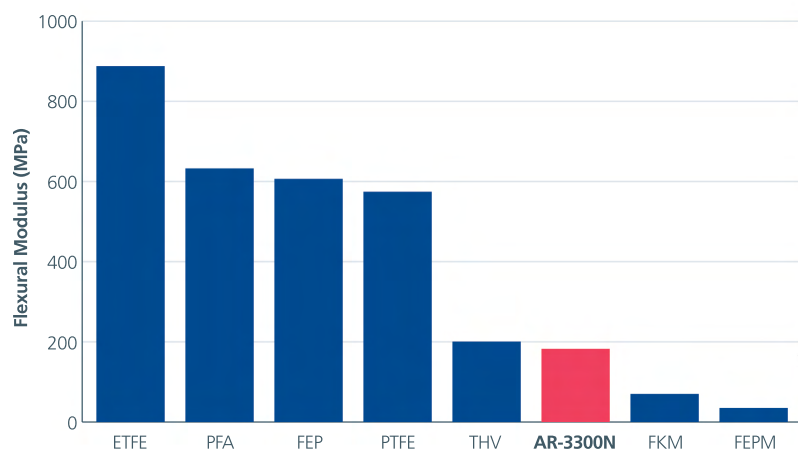


Figure 1. Flexibility as measured by flexural modulus of AR-3300N compared to various fluoropolymer materials.



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