

Flexible Compounds

Fluon+TM Flexible Compounds are melt-processable materials based on modified ethylene / tetrafluoroethylene (ETFE) copolymer and a fluoroelastomer. These compounds maintain many of the desirable properties of ETFE, but in a form that is much more flexible (see Fig. 1). These materials can be used in many applications including wire and cable (automotive, industrial, aerospace, transit, and appliance markets); films and sheets; tubing and pipe; and electronic components.

The heat resistance of Flexible Compounds can be enhanced by radiation curing and are cross-linkable without the presence of curing agents or coagents. Color can be customized by incorporating our Fluon+ ETFE color concentrates.

Common Products

Products	AR-8018TD	AR-3300N	AR-3300P
	Higher melt temperature	Flexible processing window	V-0 flammability rated

Typical Physical Properties Measured

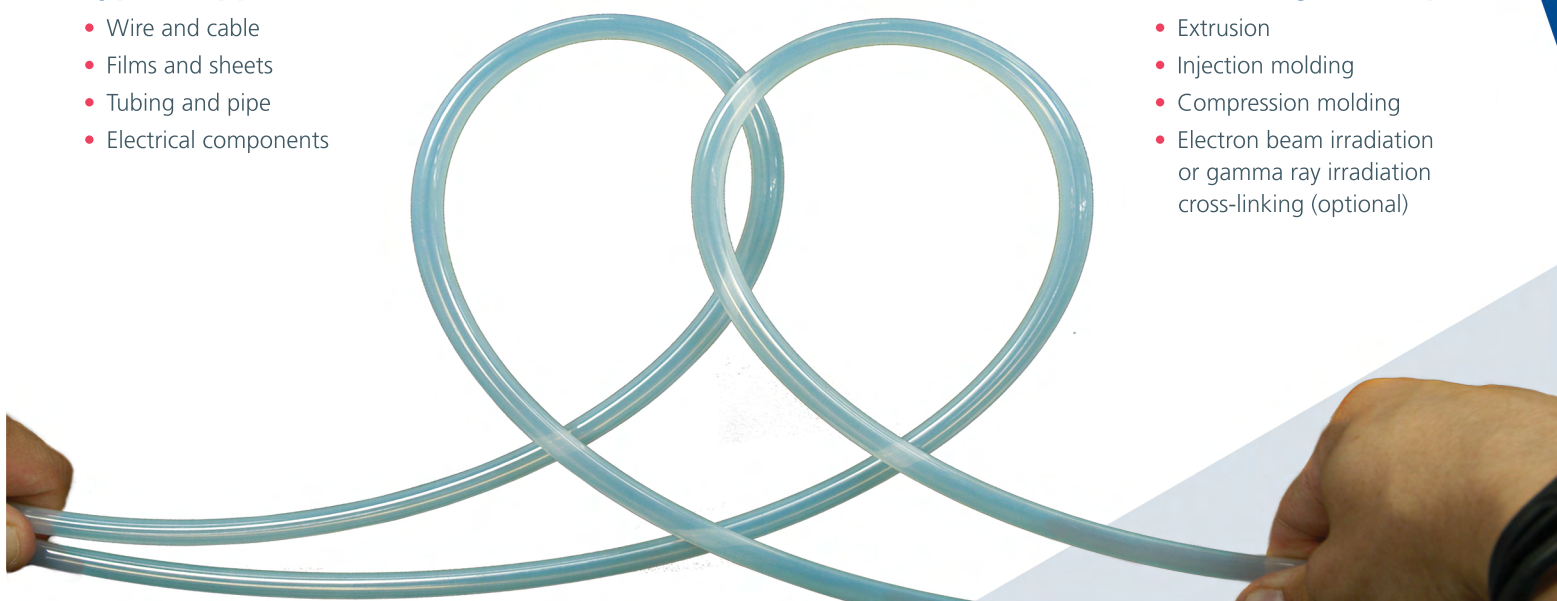
Property	Test Method	Units	AR-3300N Typical Value
Melt Flow Rate	ASTM D-3159	g/10 minutes	9
Melt Temperature	AGC Internal	°C	225
Tensile Strength	ASTM D-638	MPa	10
Tensile Elongation	ASTM D-638	%	440
Flex Modulus	ASTM D-790	MPa	140

Typical Applications

- Wire and cable
- Films and sheets
- Tubing and pipe
- Electrical components

Processing Techniques

- Extrusion
- Injection molding
- Compression molding
- Electron beam irradiation or gamma ray irradiation cross-linking (optional)



Flexibility

Fluon+ Flexible Compounds maintain many of the desirable properties of ETFE, but have lower flexural modulus (see Fig. 1).

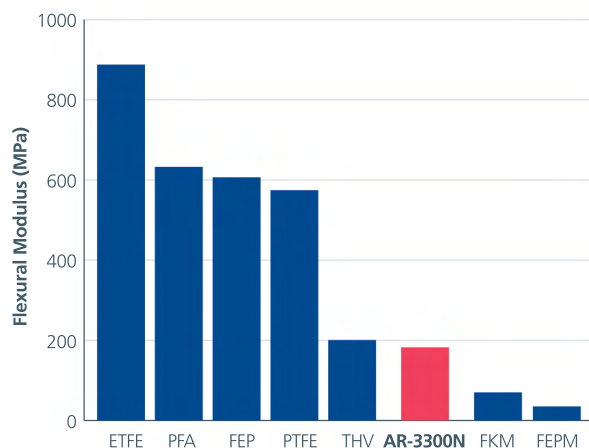


Figure 1. Flexibility as measured by flexural modulus of AR-3300N compared to various fluoropolymer materials.



Heat Aging

The heat resistance of Fluon+ Flexible Compounds can be improved by radiation curing. The product is cross-linkable without the presence of curing agents or co-agents. The recommended dosage is 1-10 Mrads of electron beam or gamma ray radiation. Figure 2 shows the effect of cross-linking on AR-3300N and how the compound retains strength at elevated temperatures.

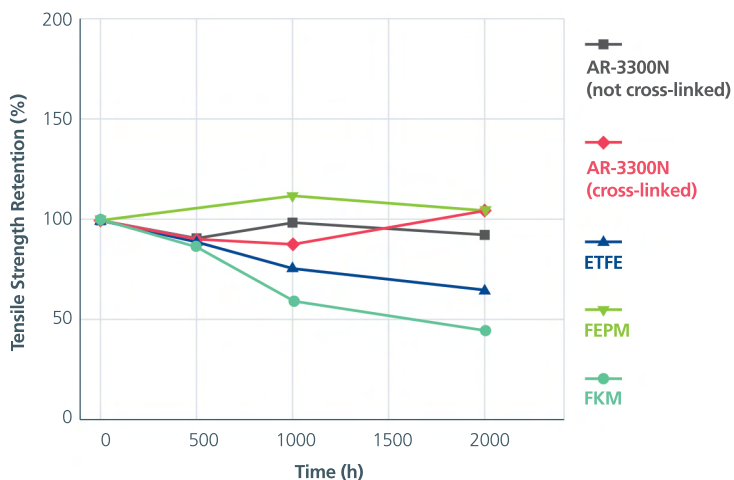


Figure 2. Tensile strength retention of AR-3300N (cross-linked and not cross-linked) at 200 °C.

Contact your AGC Chemicals commercial representative for more information on specific grades or for technical datasheets.



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