

## Flexible AR Compounds

**Fluon+<sup>TM</sup> Flexible AR** are melt-processable compounds based on modified ethylene / tetrafluoroethylene (ETFE) copolymer and a fluoroelastomer. Fluon+ AR grades 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 AR 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 C-88AXM color concentrates.

### Common Products

Products	AR-8018TD	AR-3300N	AR-3300P	AR-3300BK
	Higher melt point	Flexible processing window	V-0 flammability rated	Pre-pigmented black

### Typical Physical Properties Measured

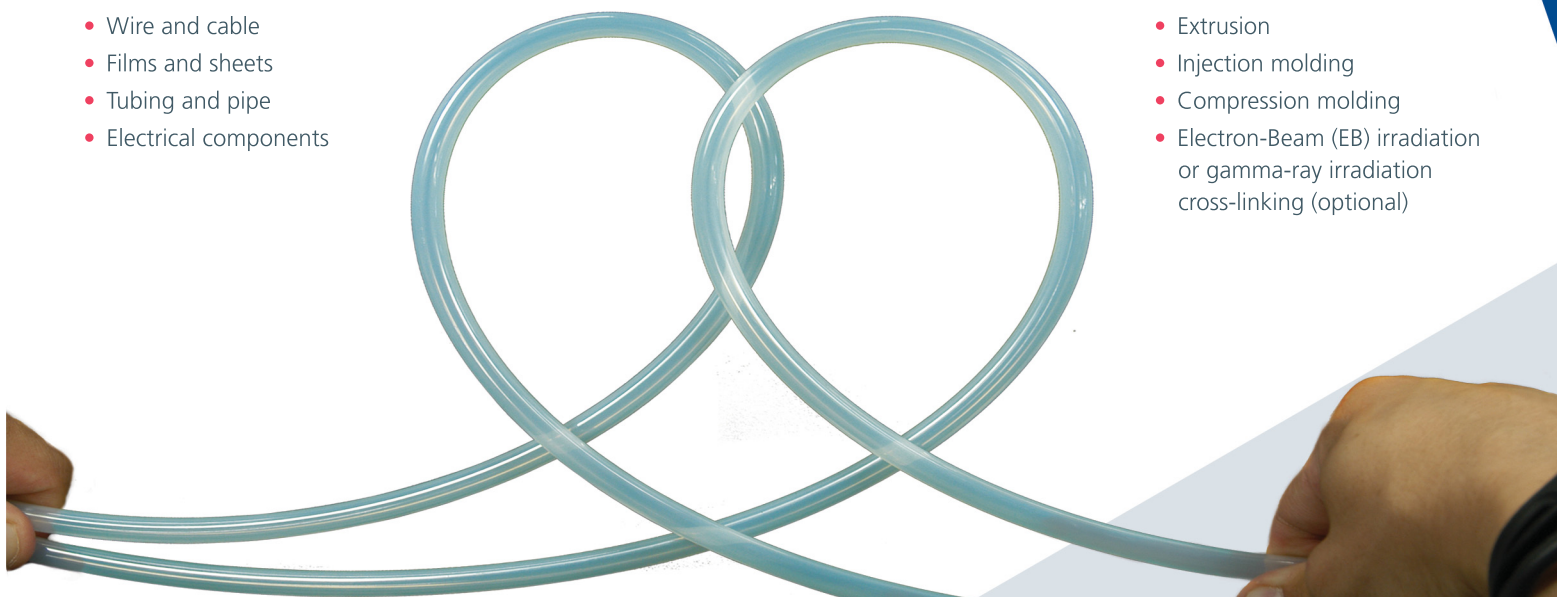
Property	Test Method	Units	AR-3300N Typical Value
Melt Flow Rate	ASTM D-3159	g/10 minutes	9
Melting Point	AGC Internal	°C	225
Tensile Strength	ASTM D-638	MPa	10
Tensile Elongation	ASTM D-638	%	440
Flex Modulus	ASTM D-790	MPa	140

### Typical Applications

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

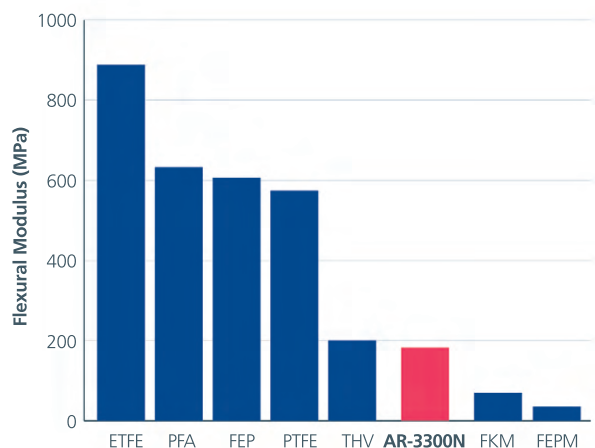
### Processing Techniques

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



## Flexibility

Fluon+ AR grades maintain many of the desirable properties of ETFE, but in a form that is much more flexible (see Fig. 1).

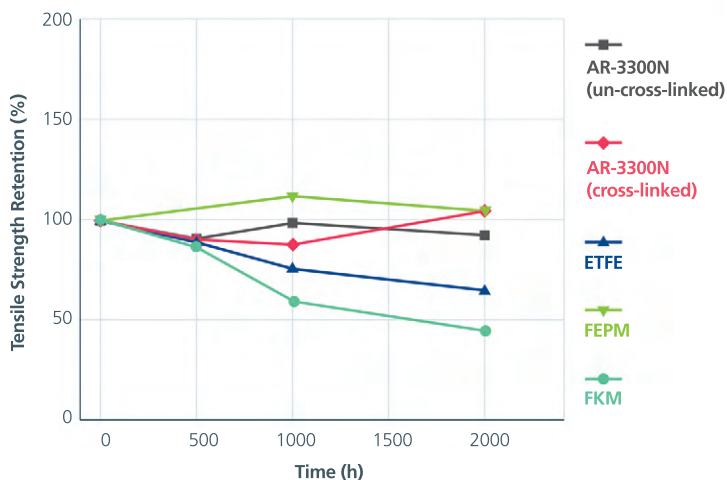


**Figure 1.** Flexibility as measured by Flexural Modulus of AR-3300N compared to various fluoropolymer materials.



## Heat Aging

The heat resistance of Fluon+ Flexible AR grades 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 un-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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