Material	Trade Names	Grade	Cost	Trace Metal Content	Chemical Compatibility	Opacity	Can be Sterilized by Irradiation?	Microwave Resistance	Non-stick properties?	Melt Processable?	Lower Service Temperature	Upper Service Temperature	Flexural Modulus (at 23° C)	Tensile Strength (at 23° C)	Elongation	Notes
PFA	Teflon, Neoflon	Highest purity grade	$$$$	Lowest	Excellent	Translucent	No	Yes	Excellent	Yes	-200°C (-328°F)	260°C (500°F)	590 Mpa	25 Mpa	280-300%	PFA is very inert and has a very wide working temperature range. While all PFA resins have very low trace metals content, the highest purity grades are the cleanest of all fluoropolymers with respect to trace metals content.
PFA	Teflon, Neoflon	Mid-level purity grade	$$$	Low	Excellent	Translucent	No	Yes	Excellent	Yes	-200°C (-328°F)	260°C (500°F)	590 Mpa	25 Mpa	280-300%	Mid-level purity grade PFA offers the same high working temperature and other properties as highest purity grade PFA, but with slightly higher trace metal content, and a lower price.
FEP	Teflon, Neoflon	Highest purity grade	$$$	Lowest	Excellent	Translucent (almost transparent)	No	Marginal	Excellent	Yes	-200°C (-328°F)	200°C (392°F)	540-640 Mpa	20-34 Mpa	300-400%	Savillex uses highest purity grade FEP which has almost identical trace metals content as highest purity PFA, but at a lower price. Maximum working temperature is lower than PFA. FEP is also slightly less translucent than PFA, being almost transparent.
PVDF	Kynar, Solef		$$	Medium	Medium	Opaque	Yes	Marginal	Good	Yes	-62°C (-80°F)	150°C (302°F)	2200 Mpa	35-50 Mpa	20-50%	While PVDF does not have the chemical resistance or ultra low metals content of PFA and FEP, it has an extremely high working temperature, and it can be sterliized by irradiation.
ETFE	Tefzel, Neoflon		$$$	Low	Excellent	Translucent	Yes	Yes	Excellent	Yes	-200°C (-328°F)	200°C (392°F)	1172 Mpa	40-46 Mpa	420-450%	ETFE does not quite have the ultra low metals performance of PFA and FEP. However, it can be sterliized by irradiation, and its low temperature capability makes it ideal for biopharma use.
ECTFE	Halar		$$	Low	Medium	Translucent (almost transparent)	Yes	Yes	Good	Yes	-70°C (-94°F)	150°C (302°F)	1172 Mpa	40-46 Mpa	420-450%	Like ETFE, ECTFE can also be sterilized by irradiation, but it has a narrower working temperature range, and has less chemical resistance.
Materials below are not injection moldable and not offered by Savillex but shown for comparison purposes.																
PTFE	Many suppliers		$$$$	Variable and largely unknown	Excellent	Opaque	No	Yes	Excellent	No	-200°C (-328°F)	260°C (500°F)	49.6 Mpa	20-35 Mpa	300-500%	There are many suppliers of PTFE resin, with very widely differing levels of metals content. The machining steps involved in manufacturing PTFE parts can add significant metal contamination.
Modified PTFE	Dyneon (TFM), Hostaflon		$$$$	Low	Excellent	Opaque	No	Yes	Excellent	No	-200°C (-328°F)	260°C (500°F)	n/a	33 Mpa	450%	Modified PTFE has lower porosity compared to PTFE. However, porosity is still much higher than injection molded products. The machining steps involved in manufacturing parts from modified PTFE can add significant metal contamination.