Polymics
Concept to Solution®

www.polymics.com

MATERIAL PROCESS **DESIGN**

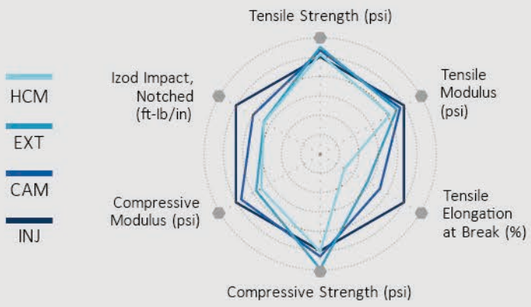
PEEK TUBES

Polymics Ltd. State College PA is the industry leader in the manufacturing of Polyaryletherketone (PAEK) tubes.
Because of its exceptional range of performance attributes PEEK has become the material of choice in industries such as;

AEROSPACE	CHEMICAL PROCESSING	OIL/ GAS, ENERGY
AUTOMOTIVE	ANALYTIC INSTRUMENTATION	
ELECTRONICS AND SEMICONDUCTOR PROCESSING		MEDICAL

To assist customers with lowering cost, maintaining key properties and providing design flexibility Polymics has developed the inhouse process technologies to deliver PEEK tubes in a comprehensive array of sizes, compounds and processes.

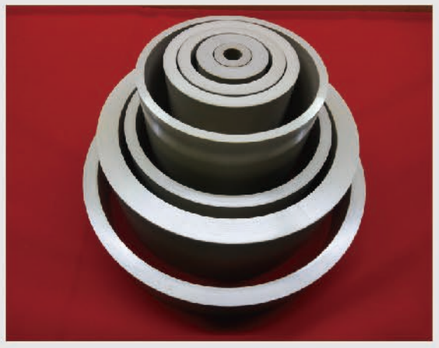
TYPICAL PROPERTY VARIATIONS BY PROCESS



Based on unfilled PEEK, processed by listed process mentioned in machine direction.

OUR TUBE LINEUP BRINGS THE FOLLOWING TO MARKET

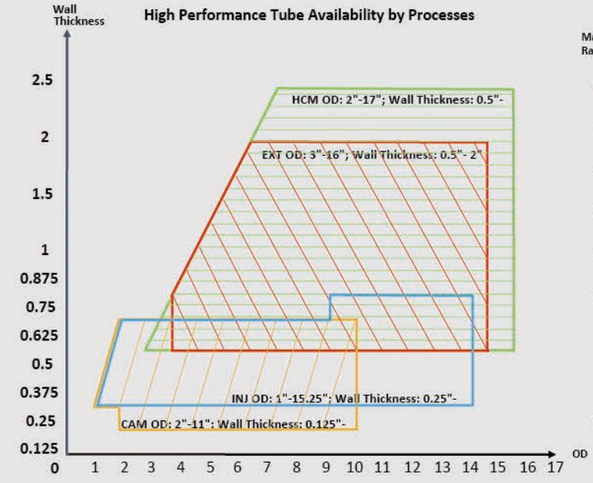
- CUSTOM FORMULATIONS TAILORED TO CRITICAL APPLICATIONS
- LOWER STRESS PARTS
- HIGHER YIELDS WITHOUT BOARD MOUNTING
- LOWER MATERIAL AND MACHINING COSTS
- INDUSTRY LEADING SIZE CAPABILITY
- EXTENSIVE RANGE OF WALL THICKNESSES
- DIVERSE PROCESSES ADOPTED TO MATCH APPLICATION REQUIREMENTS

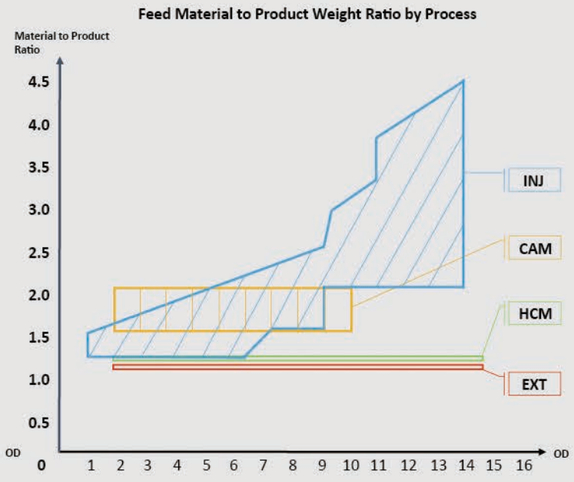


STANDARD AND SPECIALTY MATERIALS SUPPLIED IN TUBE FORM

PEEK	Unfilled, Standard & Low Stress Glass filled, Carbon filled, PTFE Filled, Standard and custom wear grades
PAEK	PEK, PEKEKK, PEKK
PAES	PSU, PESU, PPSU
Other Polymers	To maximize design flexibility for our customers, Polymics® offers tubes for seal, rings, bushing stock, in most standard and specialty polymers, compounds, blends, and alloys.

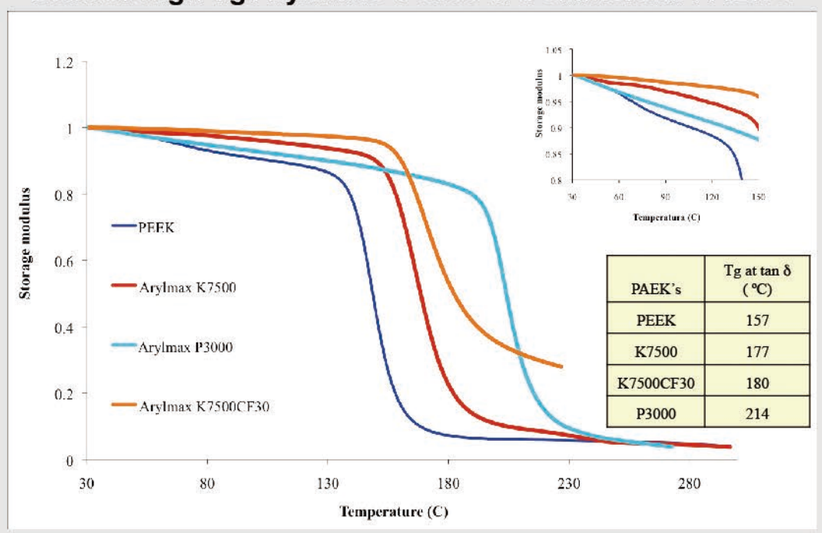
POLYMICS® PEEK TUBE COMPARISON BY PROCESSES





THERMAL-MECHANICAL PROPERTIES OF PEEK TUBE MATERIALS

DMA of High Tg Arylmax® P3000 & Commercial PAEK's



PAEK's	Tg at tan δ (°C)
PEEK	157
K7500	177
K7500CF30	180
P3000	214

Measurements made on annealed samples using 3 point bend fixture
(except Arylmax K7500CF30 measured (annealed) using single cantilever fixture)

SUMMARY

With the ability to formulate the resin solution and transfer it to a finished shape Polymics stands alone with our "Concept To Solution" approach. Polymics produces Tubes from PEEK, PEK, PEKK, PAEK, PEKEKK resin through 4 key processes (Injection Molding, Compression Molding, Extrusion and Centrifugal Molding).
These tubes are also produced with a myriad of fillers including but not limited to; glass fiber, carbon fiber and numerous lubricants for wear enhancement.

Experience and expertise in polymer production, compounding, application development, processing and secondary operations insure our customers critical part performance is met with the most cost effective approach.