Alperton Engineering Ltd
Dublin Industrial Estate,
Glasnevin, Dublin11, Ireland
www.alperton.com info@alperton.ie
Phone +353 1 8306277

PC 1000 POLYCARBONATE (PC)

Quadrant Engineering Plastic Products is marketing non-UV-stabilised polycarbonate stock shapes under the trade name PC 1000.
It is a natural, "non-optical" industrial quality (clear, translucent).

MAIN CHARACTERISTICS

- High mechanical strength
- Good creep resistance
- Very high impact strength, even at low temperatures
- Stiffness retention over a wide range of temperatures
- Very good dimensional stability (very low water absorption and low CLTE)
- Natural colour (clear, translucent)
- Good electrical insulating and dielectric properties
- Physiologically inert (suitable for food contact)

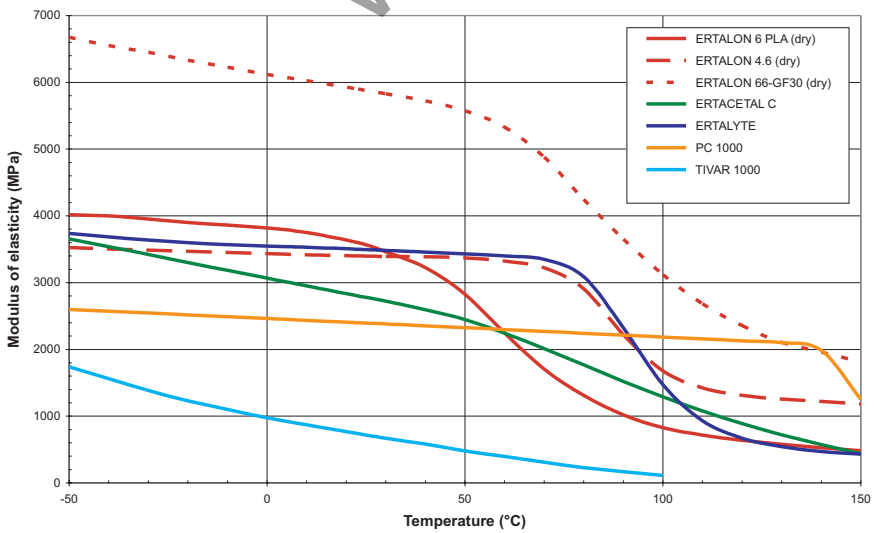
APPLICATIONS

Components for precision engineering, safety glazing, insulating parts for electrical engineering, parts in contact with foodstuffs, components for medical and pharmaceutical devices, ...

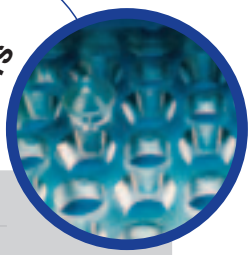
Within its portfolio of **L**ife **S**cience **G**rade Engineering Plastic Products – specifically developed for applications in the medical, pharmaceutical and biotechnology industries – Quadrant offers **PC LSG natural** biocompatible engineering plastic stock shapes for machining with certified USP Class VI and ISO 10993 compliance (see also page 32).

Fig. 5 STIFFNESS VERSUS TEMPERATURE

derived from DMA-curves



TECH NOTES: PC 1000 stock shapes show an "as extruded" surface which is not optically clear. Finished parts can be both mechanically and vapour polished to improve optical clarity. Caution: during machining, do not use water-soluble coolants but preferably pure water or compressed air.

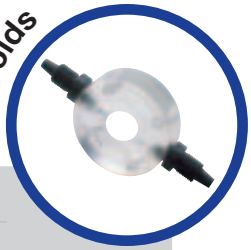


holders

Challenges: During the light bulb etching process with hydrofluoric acid (to produce white bulbs), the bulbs are placed in holders.

Solution: Due to its good resistance to hydrofluoric acid, PC 1000 has been chosen for this application.

Benefits: PC 1000 combines high dimensional stability and low level of internal stress with a high temperature resistance.



manifolds

Challenges: Many industries using acrylic parts need transparent manifolds and sight glasses that can withstand higher temperatures and impact.

Solution: PC 1000 is easily machined into these parts and meets the higher performance needs.

Benefits: PC 1000 has far higher temperature resistance than acrylic and offers greater impact resistance.