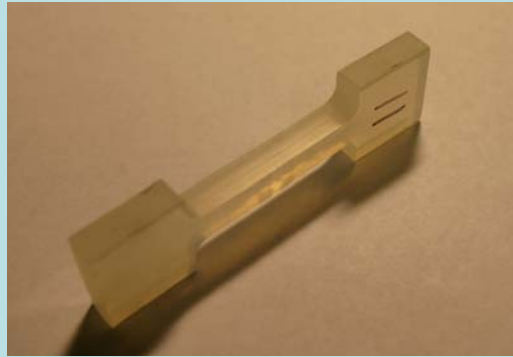


# Shape Memory Polymer



Heat up + deform



Heat up

Young's Modulus @ ambient temperature	3.19 GPa
Glass transition temperature	57.3°C onset heating @10 °C/min
Yield stress	22.0 MPa
Vickers Micro Hardness	10.0 ± 0.3
Density	1.039 ± 0.001 g/cm <sup>3</sup>
Impact	1.2 J/cm <sup>2</sup>
Tensile stress	25.4 MPa

## 3 Point Bending

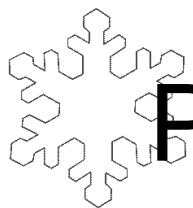
Temperature	Stiffness	Max stress
ambient	1.86 GPa	47.3 MPa
35°C	1.31 GPa	30.1 MPa
60°C	N/A	N/A

## Tension

Temperature	Modulus	Max stress
ambient	3.19 GPa	25.4 MPa
35°C	199 KPa	16.8 MPa
60°C	N/A	N/A

## Compression

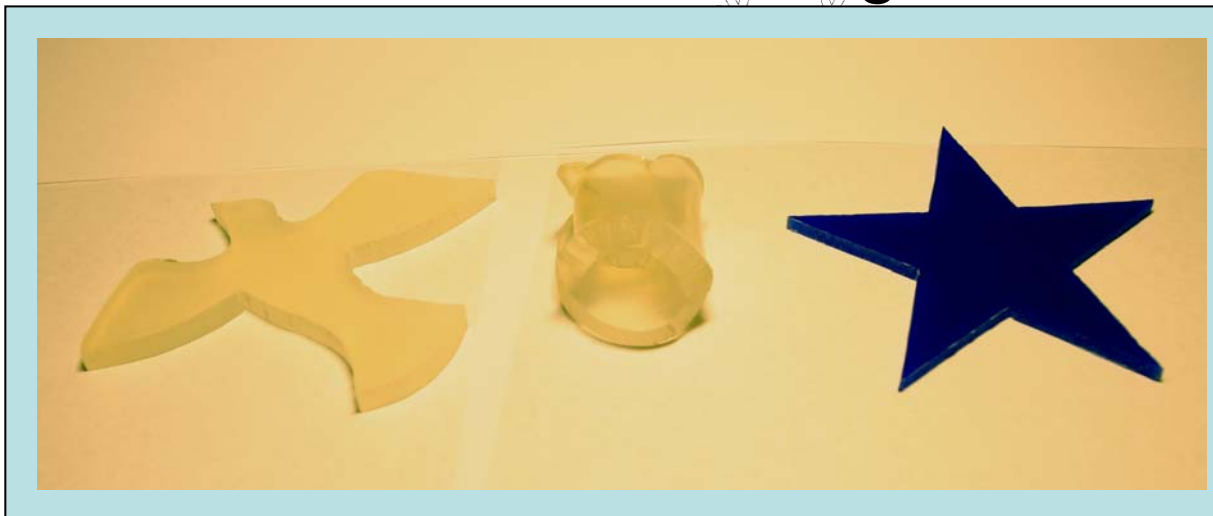
Temperature	Modulus	Max stress
ambient	246 MPa	N/A
35°C	82.2 MPa	N/A
60°C	5.18 MPa	N/A



# Plastastic Christmas Ornaments



*“Have a magical Christmas”*



As received, these ornaments appear as intricate shapes. The magic begins when the ornament is dipped in hot water – the ornament unfolds into a fun holiday shape ready to hang on your Christmas tree!

Children can't wait to watch the ornament unfold into the mystery Christmas shape!

The ornament is fun for any age. The ornament can be repeatedly heated then twisted, folded, or rolled into any wacky shape imagined, but always returns to the final holiday shape with no trouble!

- Various thickness from 1/8" to 1/4"
- Three different holiday shapes (custom shapes upon request)
- Scented ornaments available including peppermint smell



## **Warning!**

- do not heat ornament over a flame
- do not allow children to consume ornament