

Comparison of Materials

The yield stress σ_y of our classes of materials is compared in the following table. Absent from the table are the elastomers, as these rubbery materials typically do not yield but remain elastic up to their breaking point.

Yield Stress (MPa)

5000 – 50,000			CERAMICS	
500 – 5000	METALS		CERAMICS (glasses)	COMPOSITES
50 – 500	METALS	PLASTICS	(porous)	COMPOSITES
5 – 50	METALS	PLASTICS		(woods)
0.5 – 5		(foams)		

Key: CERAMICS Engineering Ceramics
 PLASTICS Engineering Polymers
 COMPOSITES Engineering Composites
 (porous) Porous Ceramics
 (foams) Foamed Polymers