

Material Behaviour

Physics

The vocabulary for how materials fail, and what each word means.

Terms and their precise meanings.

Term	Means
Brittle	Breaks with little plastic deformation
Ductile	Can be drawn into a wire — large plastic deformation
Malleable	Can be hammered into sheets
Tough	Absorbs energy before fracture
Hard	Resists surface indentation
Stiff	High Young's modulus
Strong	High breaking stress

Glass is hard and brittle. Rubber is tough and not stiff. Hard and tough are close to opposites.