

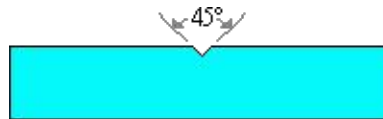


Izod Impact Strength - ASTM D256

Energy per unit thickness required to break a test specimen under flexural impact. Test specimen is held as a vertical cantilevered beam and is impacted by a swinging pendulum. The energy lost by the pendulum is equated with the energy absorbed by the test specimen.

Notes:

- Charpy Impact Strength, covered by ASTM D6110, is included here because it used to be part of ASTM D256 and is still commonly reported as such.
- Unnotched Izod Impact Strength, covered by ASTM D4812, is included here because it used to be part of ASTM D256 and is still commonly reported as such.
- Optional units of energy per unit area are supported by the standard. These are the ISO style units.



Notched Izod Specimen

Method	Name	Test Description	Diagram
A	Notched Izod Impact Strength	Specimen is held as a vertical cantilevered beam and is broken by a pendulum. Impact occurs on the notched side of the specimen.	
B	Charpy Impact Strength	Specimen is held as a simply supported beam and is impacted on the side opposite the notch. This method is now covered by ASTM D6110.	
C	Estimated Net Izod Impact Strength	This method is the same as Method A except that the energy required to toss the broken portion of the specimen is included in the energy calculation. Preferred over Method A for materials with impact strength below 27 J/m (0.5 ft-lb/in)	
D	Notch Radius Sensitivity Test	Provides an indication of notch sensitivity. Notch sensitivity is calculated using: $b = (E_2 - E_1) / (R_2 - R_1)$ where b is the notch sensitivity, E ₁ and E ₂ are the energy required to break a small and large radius notched specimen, and R ₁ and R ₂ are the radii of the small and large radius notches. Units are J/m/mm of notch radius.	
E	Reversed Notched Izod Impact Strength	Same test as Method A except the specimen is impacted on the side opposite the notch.	
	Unnotched Izod Impact Strength	Unnotched specimen is held as a vertical cantilevered beam and is broken by a pendulum. This method is now covered by ASTM D4812.	