

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ASTM D1004

Unnicked 90° Angle Tear Specimen (Graves) · Tear initiation specimen — built to ASTM D1004: Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting



OVERVIEW

Solid cutting die for cutting Unnicked 90° Angle Tear (Graves) specimens to ASTM D1004. The die is machined from a single piece of steel, hardened and finished with a sharp, precision cutting edge, so it holds its profile when cutting harder plastics from 0 to 5 mm thick.

KEY FEATURES

- Machined from a single piece of steel — no joints or seams in the cutting edge
- Hardened, precision-finished edge for clean, square specimen sides
- Cuts harder plastics, filled compounds and sheet from 0–5 mm thick
- Integral ejector plate releases the specimen after cutting
- Long service life; cutting edge can be re-sharpened

SPECIMEN PROFILE

Overall length	101.6 mm
Width of tabs	19.05 mm
Notch angle	90°
Ligament (apex to back edge)	12.7 mm
Initial grip separation	25.4 mm
Thickness	≤1.0 mm

Nominal values per ASTM D1004; die is cut to the standard's profile.

DIE SPECIFICATIONS

Die construction	One-piece machined steel body
Cutting edge	Hardened, precision-finished
Material thickness	0 – 5 mm
Recommended materials	Rigid & semi-rigid plastics, filled compounds, rubber, sheet & film
Specimen ejection	Integral ejector plate
Press compatibility	Manual, pneumatic & hydraulic sample-cutting presses
Cut profile	Unnicked 90° Angle Tear Specimen (Graves) per ASTM D1004

APPLICATIONS

- Packaging film
- Agricultural & construction film
- Medical film
- Thin plastic sheeting

ABOUT THE STANDARD

ASTM D1004 measures the force required to initiate tearing in flexible plastic film and thin sheeting at very low rates of loading. The 90° angle specimen concentrates stress at the vertex so the tear starts there and runs across the ligament.

Ordering & customization: Specify the standard and specimen type, die style (ribbon steel or hardened steel), the material and thickness you cut, and your press make/model so we can match the mounting. Custom profiles, multi-cavity dies and nick/notch features are available on request.

Also available: Ribbon Steel version

Economical steel-rule die for rubber, elastomers and soft plastics up to 3 mm thick — same ASTM D1004 profile.

Specifications are typical and may vary by configuration; confirm at time of quote. Refer to the current edition of the standard for specimen tolerances and test procedures. Part ref. UGC-CDH-D1004