

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ASTM E345 Type A

Reduced-Section Foil Tensile Specimen · Tensile specimen — built to ASTM E345: Standard Test Methods of Tension Testing of Metallic Foil



OVERVIEW

Solid cutting die for cutting Reduced-Section Foil Tensile specimens to ASTM E345. 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 (min)	200 mm
Width of reduced section	12.5 mm
Length of reduced section	60 mm
Gauge length	50 mm
Width of grip section	20 mm
Foil thickness	<0.15 mm

Nominal values per ASTM E345; 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	Reduced-Section Foil Tensile Specimen per ASTM E345

APPLICATIONS

- Aluminum & copper foil
- Battery current-collector foil
- Flexible circuit metals
- Packaging foil

ABOUT THE STANDARD

ASTM E345 covers tension testing of metallic foil less than 0.15 mm thick to determine yield strength, tensile strength and elongation. Type A is a reduced-section specimen with wider grip ends that encourages failure within the gauge length.

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 E345 Type A profile.

Metallic-specimen geometry: confirm sheet material, hardness and thickness at quote. 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-E345-TA