

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ISO 18488

Strain Hardening Dumbbell · Tensile (strain hardening) specimen — built to ISO 18488: Polyethylene (PE) materials for piping systems — Determination of strain hardening modulus in relation to slow crack growth — Test method



OVERVIEW

Solid cutting die for cutting Strain Hardening Dumbbell specimens to ISO 18488. 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	70 mm
Width of ends	20 mm
Width of narrow section	4 mm
Length of narrow section	16 mm
Thickness	0.3 ± 0.025 mm
Test conditions	80 °C, 20 mm/min

Nominal values per ISO 18488; 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	Strain Hardening Dumbbell per ISO 18488

APPLICATIONS

- PE pipe resins
- Gas & water distribution pipe
- Resin development
- Quality control of PE compounds

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 ISO 18488 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-ISO18488