

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ISO 527-3 Type 5

Dumbbell Type 5 · Tensile specimen — built to ISO 527-3: Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets



OVERVIEW

Solid cutting die for cutting Dumbbell Type 5 specimens to ISO 527-3. 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)	115 mm
Width of ends	25 ± 1 mm
Length of narrow section	33 ± 2 mm
Width of narrow section	6.0 +0.4/0 mm
Transition radius (small)	14 ± 1 mm
Gauge length	25.0 ± 0.25 mm
Initial grip separation	80 ± 5 mm

Nominal values per ISO 527-3; 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	Dumbbell Type 5 per ISO 527-3

APPLICATIONS

- Packaging films
- Agricultural & construction film
- Laminates & labels
- Thin plastic sheet

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.

ABOUT THE STANDARD

ISO 527-3 sets tensile test conditions for plastic films and sheets less than 1 mm thick. The Type 5 dumbbell suits high-elongation films that would exceed crosshead travel as a strip.

Also available: Ribbon Steel version

Economical steel-rule die for rubber, elastomers and soft plastics up to 3 mm thick — same ISO 527-3 Type 5 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-ISO5273-T5