

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for DIN 53504 S1

Standard dumbbell S1 · Tensile specimen — built to DIN 53504: Testing of rubber - Determination of tensile strength, elongation and stress values



OVERVIEW

Solid cutting die for cutting Standard dumbbell S1 specimens to DIN 53504. 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
Width of narrow section	6.0 ± 0.4 mm
Length of narrow section	33 ± 2 mm
Gauge length	25 mm
Recommended thickness	2.0 ± 0.2 mm

Nominal values per DIN 53504; 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	Standard dumbbell S1 per DIN 53504

APPLICATIONS

- Vulcanised rubber sheet
- TPE and TPU compounds
- Compound development and QC
- Tensile strength and elongation at break

ABOUT THE STANDARD

DIN 53504 covers tensile testing of vulcanised rubber and thermoplastic elastomers using dumbbell or ring test pieces. S1 is the largest dumbbell, equivalent to ISO 37 Type 1, for sheets with ample material.

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 DIN 53504 S1 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-DIN53504-S1