

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ASTM D1693

Bent-Strip ESCR Specimen · Environmental stress cracking (ESCR) specimen — built to ASTM D1693: Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics



OVERVIEW

Solid cutting die for cutting Bent-Strip ESCR specimens to ASTM D1693. 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

Length	38 ± 2.5 mm
Width	13 ± 0.8 mm
Thickness (Cond. A, B)	3.00–3.30 mm
Thickness (Cond. C)	1.84–1.97 mm
Notch length	19 ± 0.5 mm
Notch depth (Cond. A)	0.50–0.65 mm

Nominal values per ASTM D1693; 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	Bent-Strip ESCR Specimen per ASTM D1693

APPLICATIONS

- PE bottles & containers
- Pipe & fittings
- Geomembranes
- Wire & cable jacketing

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

ASTM D1693 evaluates the susceptibility of polyethylene to stress cracking when bent, notched strips are immersed in a surface-active agent. Rectangular strips are notched, bent into a U-shaped holder and monitored for failure over time.

Also available: Ribbon Steel version
Economical steel-rule die for rubber, elastomers and soft plastics up to 3 mm thick — same ASTM D1693 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-D1693