

CCSi *Ultra-Life* Specimen Mold: ASTM D5963



D5963 *Ultra-Life* Specimen Mold

CCSi *Ultra-Life* molds are designed, engineered, and manufactured to produce high quality specimens, over an extended service life!

CCSi manufactures these specimen molds for evaluating resistance to abrasion of rubber materials through the measure of volumetric loss of a specimen exposed to the action of a normalized abrasive medium secured to a rotating cylinder, as described in [ASTM D5963](#) “*Standard Test Method for Rubber Property-Abrasion Resistance (Rotary Drum Abrader)*.”

The rotary drum type abrader is commonly referred to as the “DIN Abrader” as it complies with DIN 53516 “*Testing of rubber and elastomers; determination of abrasion resistance*.”

These two test methods are technically identical, and may be used interchangeably. They require a cylindrical specimen, having a diameter of 16 ± 0.2 mm (0.630 ± 0.008 in.) and a minimum thickness of 6 mm (0.24 in.) When practical, the preferred method for preparing test specimens is by molding, otherwise they may be cut from sheets or articles using the CCSi [D5963 Specimen Cutting Die](#).

CCSi also features the [Gibitre™ DIN Abrader](#) and the [Hung Ta™ DIN Abrader](#), both of which are suitable for this application and comply with the requirements of both the ASTM and DIN standards.

CCSi *Ultra-Life* Specimen Molds: Quality Manufacturing

CCSi *Ultra-Life* molds are manufactured from homogenous, solid, high carbon content A2 mold steel. Each undergoes precision grinding and CNC (Computer Numerical Control) machining to exacting requirements. The mold cavities are expertly honed and hand polished, after which the mold is industrial chrome plated.

Precision grinding ensures a parallel surface profile of the platens and CNC machining provides ultra-close dimensional tolerances, while the honing and polishing processes guarantee smooth, true specimen cavities. The durable, hard chrome finish resists the corrosive and adhesive effects of most compounds, greatly improving overall durability and ease of maintenance.

The CCSi *Ultra-Life* mold platens are thicker than standard molds, providing superior heat and pressure distribution, as well as extending the mold’s useful life by resisting distortion. This also allows the overflow recesses to be deeper, reducing problems associated overfill. The platens are positively positioned with precision guide pins and receivers ... assuring precise closure!

CCSi *Ultra-Life* Specimen Molds: Innovative Design

CCSi *Ultra-Life* molds feature a unique cam-action hinge design which improves the critical distribution of pressure. Typical ‘fixed-hinge’ designs cause material to flow, outwardly, from this constraining point. This uneven application of pressure may cause excessive overfill, or cavity voids. The cam-action hinge design has all of the advantages of ‘stacked plate’ molds, combined with the convenience of ‘fixed-hinge’ designs!

The handles are manufactured from 304 stainless steel (a chromium - nickel austenitic alloy) and contain integral support pins. This allows the handles to rotate, which facilitates opening the mold. The handles are ergonomically positioned to ease placement and removal from the heated laboratory press.

Large triangular pry slots are located at the corners, opposite the cam-action hinges. These further facilitate mold opening and reduce the occurrence of cavity damage from improperly positioned tools.

CCSi *Ultra-Life* Specimen Molds: Features

The CCSi ASTM D5963 Specimen Molds Feature:

- Exclusive *Ultra-Life* engineering;
- Designed with advanced 3D solid modeling;
- Manufactured using computerized systems and techniques;
- CNC (Computer Numerical Control) 4 axis machining;
- Precision ground;
- Expertly honed;
- Finely polished;
- High carbon content A2 mold steel;
- Thicker plates resist warping, distribute heat and pressure evenly;
- Cam action hinges prevent uneven closure;
- Industrial chrome plate finish;
- 304 stainless steel rotating handles ease opening, closing and handling;
- Deep overflow recesses (flash pockets) reduce overflow problems;
- Precision locator pins & receivers assure positive alignment;
- High strength fasteners resist the effects of strain and stress;
- Temperature probe orifices may be added for profiling;
- Optional finishes are available for highly corrosive compounds.

Available in:

- ASTM D5963 *Ultra-Life* 16 Cavity Mold.

CCSi *Ultra-Life* ASTM D5963 Specimen Molds: Specifications & Pricing

| Part Number | Mold Configuration | Specimen Size |
|--|--|--|
| CCS-MD5963-16 | D5963 16 Cavity, 2 Plate Specimen Mold | $\varnothing 16 \pm 0.2 \text{ mm} \times 6 \text{ mm}$ ($\varnothing 0.630 \pm 0.008 \times 0.24 \text{ in.}$) |
| Please Request a Quotation for current pricing and delivery. | | |

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