Analog Classic Style Durometer

ASTM Type C Model 307CL

ASTM Type C Durometers are for determining indentation hardness of Medium Hard Rubber, Elastomers, Epoxies and Thermoplastics.

- Accuracy ±1 Point
- Max Hold Pointer Standard
- A2LA/NIST Certification Available
- Easy to Read 0 to 100 Point Dial
- Accessory Test Stands Available
- Each Instrument is Individually Calibrated
- Meets or Exceeds Current ASTM D2240 Specifications for Type C
- Includes Aluminum Test Block and Sturdy Carrying Case

QUALITY MANAGEMENT SYSTEM
ISO 17025
ACCREDITED
LABORATORY

PTC®'s Model 307CL ASTM Type C Durometer measures the hardness of hard rubber, thermoplastics, epoxies, and other similar materials. The Model 307CL meets or exceeds American Society for Testing and Materials (ASTM) D2240 Specifications.

The instrument features a low glare serialized dial with bold, easy to read numbers. The durometer has a Max Hold hand which maintains the peak reading until reset. Each durometer comes complete with a test block and carrying case.

PTC® manufactures durometer test stands compatible with the 307CL.

Hydraulic (Model 7000D),

Deadweight (Model 475)

Spring Load (Model 320)

Model 475

PTC Metrology™ is accredited by A2LA for durometer calibration to ISO/IEC 17025 & ANSI/NCSL Z540-1. NIST traceable certification is available for all durometer types covered by current ASTM D2240, ASTM F1957, ISO 868, ISO 7619 and DIN 5305 standards.

The calibration report will include both “as received” and “as left” data. Complete durometer calibration includes ***Indenter Geometry and Extension, Indicator Linearity and Force Curve.***

Other durometer types, custom models and durometers from other manufacturers can also be certified by PTC Metrology™.

SPECIFICATIONS

Range (Type C)	0 to 100 points
Accuracy	±1 point
Test Block (included)	Model 402C
Height	4 in. (10.2 cm)
Width	2-1/4 in. (5.7 cm)
Depth	1-3/4 in. (4.4 cm)
Weight	8 oz. (227 g)
Shipping Weight	3 lb. (1.4 kg)

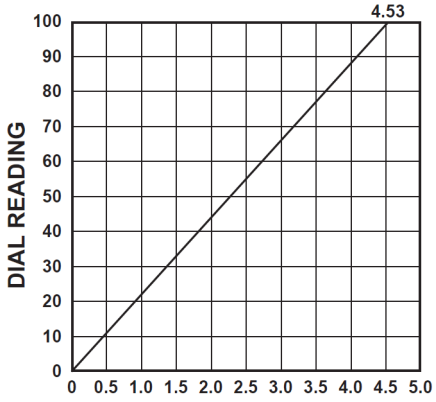
OPERATING INSTRUCTIONS

The following procedures are based on ASTM Standard D2240. This standard is recognized as being definitive, however, not all applications require such stringent controls.

Readings below 10/C may be inexact and should be made on a Type A durometer.

The surface of the sample to be tested shall be clean and smooth. The sample should be at least 1/4" (6 mm) in thickness unless it is known that identical results are obtained with a thinner specimen. Thinner materials can be stacked to obtain the minimum thickness (DO NOT GLUE). Such results may not agree with those of a solid specimen. Most materials above 50/C can be tested with a 1/8" (3 mm) minimum thickness. The sample should be large enough so that the indenter is at least 1/2" (12 mm) from any edge unless it is known that identical results are obtained when measurements are made closer to the edge. The surface of the specimen shall be flat over a sufficient area to permit the presser foot to contact the specimen over an area having a radius of at least 1/4" from the indenter point. The temperature of the specimen should be 73.4°F ±3.5°F (23°C ±2°C). The specimen should be allowed to rest at this temperature for at least 1 hour prior to testing, as the properties of most materials change with temperature.

Place the specimen on a hard, horizontal surface. Set the ancillary hand of the durometer below 5 points on the dial. Hold the durometer vertically with the point of the indenter at least 1/2 " from any edge. Apply the presser foot to the specimen as rapidly as possible, without shock, keeping the foot parallel to the surface of the specimen. Apply just sufficient force to obtain firm contact between the presser foot and the specimen. Hold for 1 or 2 seconds, the maximum reading can be obtained from the ancillary hand. If other than a maximum reading is needed, hold the durometer in place without motion and obtain the reading after the required time interval. Make 5 tests at least 1/4" apart and use the average value.



Force curve for Model 307CL
(ASTM D2240 Type C)

CALIBRATION CHECK

For a complete calibration check of mainspring, and visual and mechanical check of indenter, the instrument should be returned to PTC Metrology™

(See Guarantee & Calibration Service) or refer to ASTM D2240 Specifications. PTC® recommends the unit be returned at least every 12 months for this check. For a quick field check, follow the guideline below. *Under no circumstance should a test block be used as a standard to calibrate a durometer.*

1. The pointer should read zero when no force is applied to the indenter of the durometer.

2. Hand hold the durometer and insert the indenter into the hole of the calibrated test block. Apply enough force to make firm contact between the top surface of the test block and the base of the durometer. The dial reading should agree with the value stamped on the check block (±1). Several tests should be made and the results averaged.

3. The indenter must protrude 0.098 to 0.100 inches below the base of the durometer.

4. When the indenter is fully displaced, the durometer should read 100 points. Use care as to not damage the tip of the indenter.

LIMITED LIABILITY WARRANTY

PTC® products are covered by a limited liability warranty from defects in material and workmanship for one year from date of purchase. This warranty does not apply if, in the judgement of PTC®, the product fails due to damage from shipment, handling, storage, accident, abuse or misuse, or if it has been used or maintained in a manner not conforming to product's instructions, has been modified in any way, or has a defaced or removed serial number. Repair by anyone other than PTC® or an approved agent voids this warranty. The maximum liability of PTC® is the product purchase price.