e2000 Digital Durometer

ASTM Type B Model 511B

ASTM type B durometer gauges measure the hardness of skate wheels, printing platen, rubber, thermoplastic, and elastomers.

- Accuracy ±1 Point
- 1.25” Diameter Base
- Max Hold Pointer Standard
- LCD Display with 0.1 Point Resolution
- Two CR2450 batteries included
- Accessory Test Stands Available
- Each Instrument comes with a Certificate to N.I.S.T.
- Meets or Exceeds Current ASTM D2240 Specifications for Type B
- Includes Aluminum Test Block, 115V AC Adaptor and Sturdy Carrying Case

The ultimate durometer for accurate hand held hardness measurements. PTC® leads you into the new millennium with this durometer’s refined styling. The durometer is easy to grip and the 1.25” diameter base has a large landing area for increased stability and maximum repeatability.

The instrument uses a digital readout indicator with bold, easy to read numbers. The unit has a data port for downloading information to a PC or printer.

Features also include an auto shutoff timer and low battery warning display.

The test blocks are color coded to match the durometer type. The blocks will read within ±1 point of a properly functioning durometer.

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 B)	0 to 100 points
Accuracy	±1 point
Test Block (included)	Model 401B
Height	6 in. (15.2 cm)
Width	2-1/4 in. (5.7 cm)
Depth	1-1/2 in. (4.4 cm)
Weight	13 oz. (227 g)
Shipping Weight	4 lb. (1.8 kg)

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.

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.

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. 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. With the durometer held vertically, press and hold release the 'ON/ clr' button to turn on the digital indicator.

If desired, press and release the 'HOLD' button to enable max-hold. 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 by a setting on

the indicator (see above). When max-hold is enabled the maximum value reached will automatically be displaced and held until reset. To disengage the maximum feature, press and release 'HOLD' button again. 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.

DIGITAL INSTRUCTIONS

Power On

Press and hold ON/CLR until indicator turns on.

Power Off

Press OFF/MODE

Auto-Off Toggle

Press the 2ND button until 2ND appears on the display. Press the OFF/MODE.

An hour glass appears at left side of display if AUTO OFF is active. If AUTO OFF is active the indicator will power off in 10 minutes with no activity (button press or spindle movement).

Hold Mode

Allows you to hold the value on the display according to the specified mode.

Press HOLD to toggle hold mode on and off.

MAX - Holds and displays the highest reading attained.

MIN - Holds and displays the lowest reading attained.

FRZ - Holds and displays the reading displayed when HOLD is engaged.

Note: Pressing ON/CLR button resets indicator to spindle position except in FRZ; resets to zero.

Reset to Factory Default

This will set all features and functions back to the factory default settings.

Press the 2ND button (2ND icon should appear on the display), followed by ON/CLR, then press IN/MM.

Note: Factory defaults cannot be reset if the LOCK feature is on.

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.