



Racing Tire Durometer ASTM Type A Model 306RL



ASTM Type A Durometers measure the indenter hardness of Soft Rubber, Elastomers, Waxes, Printing Rollers, Neoprene, EPDM Rubber, Silicone and Polyurethane.

- 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 A
- Includes Aluminum Test Block and Sturdy Carrying Case



The Model 306RL Durometer is designed to measure racing tire hardness in compliance with ASTM D2240 Type A hardness.

The large rectangular base, 1x1.5 inches, makes it easy to obtain accurate repeatable readings.

The instrument has a low glare aluminum dial with bold, easy to read numbers. The durometer comes standard with a Max Hold hand which retains the peak reading.

Our racing tire durometer was designed to produce accurate results each time to give you the edge for your rally, motocross, drag, kart, F-1, Nascar, etc. Drivers routinely refer to tires as "hard" and "soft," hard tires supposedly being the norm for a newly repaved race track. Many race tracks rely on tire durometers that are used to measure the indentation hardness of the tire.

Actual Durometer Hardness Readings Reported:

- Michelin Pilot Sport Cup @ 68F = 62A DP @ 112F = 55A DP durometer
- Avon Tech R-A @ 69F = 58A DP @ 165F = 46A DP durometer
- Hoosier R3S05 @ 66F = 56A @ 165F = 44A durometer
- Kumho ECSTA V710 @ 66F = 58A
- BF Goodrich Traction T/A all-season tire @ 74F = 58A durometer
- Michelin Cross Terrain SUV all-season @ 74F = 59A durometer
- Michelin Rear Formula 1 slick @ 73F = 70A durometer
- Bridgestone Rear Formula 1 Rain i @ 74F = 66A 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 A)	0 to 100 points
Accuracy	± 1 point
Test Block (included)	Model 401
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 the definitive standard in the US and is similar to DIN, ISO and JIS standards.

Readings below 10/A may be inexact and should not be reported for most materials. Readings above 90/A should be made on a Type D durometer.

To use a model PTC 306RL durometer to measure tire tread hardness, PTC recommends the following procedure.

Set the memory hand to below 20.

Place the short axis of the durometer base on the tire aligning the long axis with the direction of travel.

Tilt the unit up about 30 degrees resting on short axis.

Gently roll the base of the durometer on the tire exerting approximate 2.5 pounds of downward force until the durometer is tilted approx 30 degrees in the opposite direction. This motion should take a little over a second to complete.

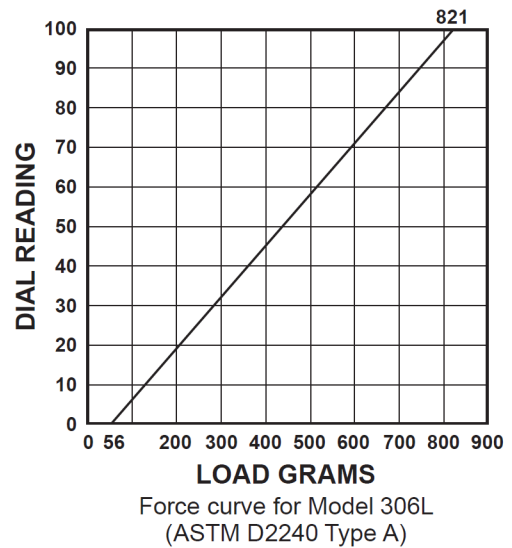
The tire hardness may now be read from the memory hand. Be smooth and do not rush to obtain accurate and repeatable readings.

For best results take 3-5 tests at least 1/4" (6 mm) apart and use the average value.

Record the hardness and temperature for future reference

Readings are normally taken from 70-77 degrees fahrenheit. For other temperatures the temperature should be noted. We recommend a PTC Model 315F surface thermometer or Model 35135 digital surface thermometer.

There are other test methods involving time delays, which PTC does not recommend for tire hardness.



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.