

Digital Shore Hardness Tester

Safety Precautions

GB

To ensure operator safety, use this instrument in conformance with the directions and specifications given in this User's Manual.

Notes on Export Regulations

You shall agree to commit no act which would, direct or indirect, violate any law or regulation of Japan or your country, or any other international treaty, relating to the export or re-export of any commodities.



- Do not disassemble, short-circuit, charge, or heat the battery. Otherwise the battery content may leak to come into contact with the eye, or cause battery heating or explosion.
- If a battery is swallowed, immediately consult a doctor.



Disposal of Old Electrical & Electronic Equipment (Applicable In the European Union and other European countries with separate collection systems)

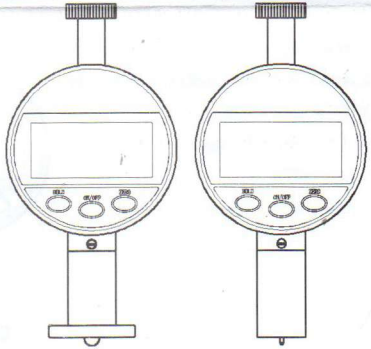
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. To reduce the environmental impact of WEEE (Waste Electrical and Electronic Equipment) and minimize the volume of WEEE entering landfills, please reuse and recycle. For further information, please contact your local dealer or distributors.

Instruction

Digital shore hardness tester is mainly used to measure the hardness of vulcanized rubber and plastic, there are A, C, D three types. Type A and D are respectively suitable to measure the hardness of low, medium hardness and high hardness rubber. Type C is suitable to measure the hardness of cellular rubber and plastic material usually with the compression ratio 50%, the pressure more than 0.049MPa. The product conforms to the standards of GB/T531, Gb2411, HG/T2489, JB6148.

Main Parameters

1. Measuring range: 0-100 degree.
2. Measuring error: 20-90 degrees, error $\leq \pm 1$ degree.
3. Resolution: 0.5 degree.
4. Indenter tip stroke: 0-2.5 mm.
5. Indenter tip pressure:
A, C type: 0.55-8.05N;
D type: 0-44.5N.



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Usage

Put the specimen on a hard, flat surface, hold the tester, making the indenter tip at least 12 mm away from the specimen edge, and press stably and vertically the indenter cylinder into the specimen, until the indenter cylinder fully contacts specimen, read it within 1 s. Measure at least 5 times in different places, with the distance between measuring points at least 6 mm, and take a average (the distance between measuring points for cellular rubber and plastic material at least 15 mm). In order to make measuring condition stable, and improve the measuring accuracy, the tester should be installed onto the relative produced supporting test stand.

Notices

1. Check before usage, and make sure it display " 000 " in free state (If not, press the " zero " key to set zero). When placed on the flat reference surface (glass or metal platform), it should display 100 ± 1 degree. If it does not display correctly, the tester does not work well and should be sent back to the manufacturer.
2. When pressing the D type tester onto the reference surface to check zero position, because the rigid indenter is likely to be pressed into the reference surface under high load, and make it hard to read accurately, the standard gauge block should be put on the reference surface. Hold the tester by hand when operating and making the indenter tip right pointing at the central hole in the standard gauge block, then press the tester, until the indenter cylinder fully contacts with the standard gauge block and the reference surface, the tester should display 10 ± 1 HD (gauge block thickness 2.25 ± 0.003 mm, which equals the pressing depth for tester by 10HD), if not, the tester can not be used.
3. The rubber specimen should be prepared under GB/T531 requirements, the plastic specimen under Gb2411 requirements, and the cellular rubber and plastic material specimen under HG/T2489 requirements.
4. If condition permits, the cellular rubber and plastic material specimen should be adjusted in a laboratory before measuring under GB/T2941, GB/T2918 requirements.
5. When the measured value for specimen exceeds 90HA with Type A tester, Type D tester is recommended; When the measured value for specimen is below 20HD with Type D tester, Type A tester is recommended; When the measured value is below 10HA with Type A tester, it is not accurate, and the measuring results can not be used.
6. After tester usage, it should be wiped clean and put into the instrument box, then put it a dry place to avoid moisture, the test stand should often be wiped, and smeared some anti-rust oil to prevent rust, and also #20 engine oil should be adopted in the moving parts.

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