

Durometer / Rubber Hardness Tester

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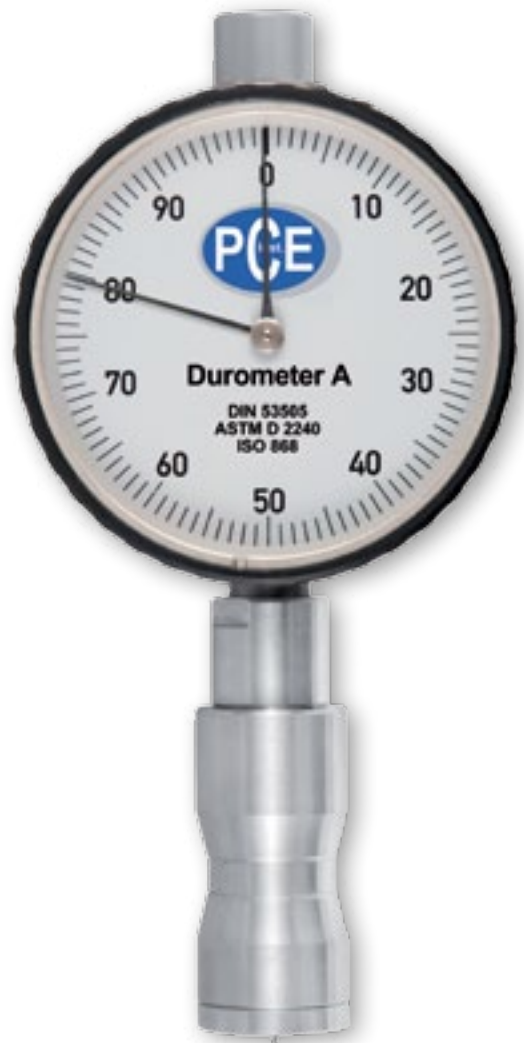
Such material as rubber can be found in a wide range of products, i.e. rubber materials in industrial production, car tires, kitchen utensils, stationary (eraser), shoe soles, different polymers, gels etc.

To measure the hardness of a certain kind of rubber Durometer, an internationally accepted device, is used. Rubber hardness is an extremely important parameter which has got correlation to the flexibility (elasticity) of the material, as it is important how deeply the measuring device can go into the surface. Durometer in fact helps to find out how much the rubber tested can resist the pressure on its surface, but it does not help to find out how well the material can serve, how quickly it will wear out, give cracks or get scratches.

So, it is impossible to decide about the outer image of a certain product based only on the results of the Durometer measurement. Nevertheless these measurement results help to get an idea about how hard the material really is. The result usually comes in number values. The sample the surface of which is tested should be of a certain thickness (not less than 6.4 mm).

The result of the measurement also depends not only on the material itself, but on the size of the foot that penetrates into the surface and the length of the test, as hardness at the very beginning can be different from the result which comes after the indentation on the surface during a certain time. Usually it should be carried out on a flat surface.

There are mostly two types of scales that are used for measurements. Shore A and Shore D, for softer elastomers and harder materials correspondingly. There is one more scale Shore O, which can be used for very soft rubber materials. The number values on the scales are from 0 to 100 and all the three of them overlap, which is quite easy to explain. Different durometers have different sharp points which penetrate the surface. For example, if to use the Shore D for a very soft rubber it will give you false reading, that is why to avoid that the scale for Shore A ends at 95 for example, and it makes sense to continue with Shore D in that case.



The range of the rubber materials is incredibly wide and each material has got its own peculiarities, thickness and hardness. The correctly chosen Durometer will help you to achieve the best result and to satisfy any kind of requirements when it goes about the rubber products.

