



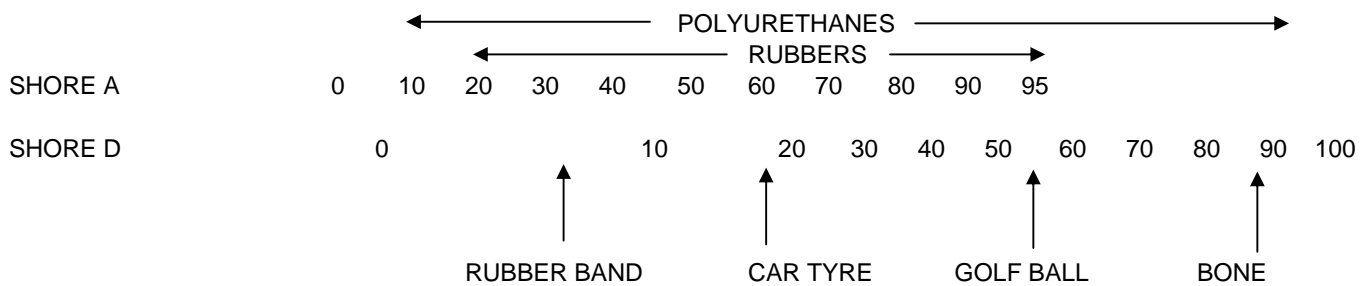
AUSTRALIAN TECHNICAL RUBBER

Hardness

As applied to rubber products , is defined as relative resistance of the surface to indentation by an indenter of specified size under a specified load .

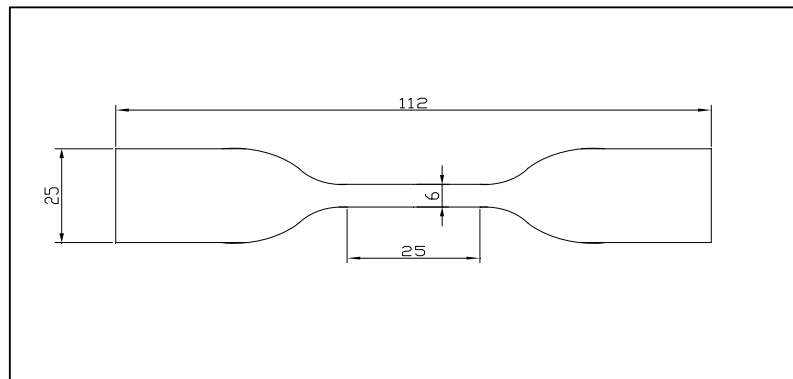
The numerical hardness value represents depth of penetration.

There are many different Hardness scales available , however the two most common are Shore A and Shore D



Tensile Strength

Is a measure of how many PSI of force required to make the standard test dumbbell as shown below to rupture



Elongation

Is the measurement of how much the Tensile sample stretched prior to rupture.

Example : a material that broke when stretched to 3 and a half times it's original length would have a Elongation of 350%

Eg	Original size	25mm
	Rupture at	87 mm
	Result	350 % elongation



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Compression Set

This is a measurement of a material that has been compressed by 50% of its original thickness for 22 hrs @ 70 degrees C .Once material is removed and has returned to ambient temperature it is measured again to attain % of original thickness

Eg	Original size	6mm
	After test	4mm
	Result	33 % Compression Set

Modulus

This is a measurement of force required to stretch a material to either 100 OR 300 % of their original sizes.

EG	60 Duro Natural Rubber			
	Original size	100	Original size	100
	Stretch to	200	Stretch to	300
	Elongation	100%	Elongation	300%
	Force Required	650 Psi	Force Required	1250 Psi

Tear Strength

This is a measurement of a materials resistance to tear .
Often referred to the trouser tear test and is done by cutting a slit in the material and applying force in opposite directions and measuring the force required.

EG	90 Duro Polyurethane
	Force Required to tear

Specific Gravity

This is a measurement of how heavy a material is in a given volume.

EG	Pure Water	1
	Motor oil	0.9
	Polyurethane	1.1
	Viton	1.8
	Mild steel	7

Viscosity

This is a measurement of how thick or viscous a material is .
the lower the value the thinner the liquid.

EG	Pure Water is	1 cps	(centipoises)
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