

ROCKWELL HARDNESS SCALE:

The hardness of a material is defined as its resistance to another material penetrating its surface. Although hardness testing does not give a direct measurement of any performance properties, hardness correlates with strength, wear resistance, and other properties.

The Rockwell Scale, developed in conjunction with the American Society for Testing and Materials, is the most often used measure of metal hardness in the world today. It is an indentation testing method. The Rockwell test uses a small steel sphere or a diamond cone as an indenter. This indenter is pressed into the test sample at a specific pressure to measure the material's resistance. The amount of deformation or penetration at this specific pressure determines the Rockwell Hardness. The higher the number, the harder the material being tested.

Rockwell Hardness is described in a 'range'. For example, 52+/54- means that the hardness is greater than 52, but less than 54. If a cutting edge is too soft for its application, it won't hold its sharpness well, and the edge can actually roll over. If the cutting edge is too hard, it is difficult to sharpen, and can actually become brittle causing the blade to crack or split. At A. M. Leonard, we have discovered that the optimum hardness varies from tool type to tool type. For a small pair of shears, a Rockwell Hardness of 49+/50- works well. However, for a larger and heavier tool, it is beneficial to have a slightly harder cutting edge.

A.M. Leonard has a history in the Green Industry dating back over 100 years. We continue to put this experience and knowledge to use, making sure we have the best tools available for our customers! Click on the following links to view our own fine line of pruning tools, all rated with Rockwell Hardness Testing.