Hardness - Method of hardness testing

Honing stone hardness

The hardness denotes the strength by which each particle of grain is retained by the bonding within the honing stone. The hardness is identified by a number for vitrified honing stones with a grit size of 150 and finer; **200** represents an **extremely soft** stone and **0** an **extremely hard** stone.
The honing stone hardness for grit sizes 120 and coarser are identified in a similar way to grinding wheels by using an alphabetical letter from A for very soft to Z for very hard.

Hardness testing

The hardness grading of honing stones is considerably more precise when compared to the method used for grinding wheels.
A special method of testing has been developed for grit sizes from 150 grit and finer.
This modified Rockwell-system utilizes a ball applied under pressure onto the honing stone block. The hardness value is the depth of the ball indentation; the higher the value, the softer the stone.

Honing stone hardness

Marking	Minimum hardness	Maximum hardness
Grit size 150 and finer	**200**	**0**
Grit size 120 and coarser	**A**	**Z**

Hardness testing method

Ball diameter	**5 mm**
Pre - load	**98.1 N (10 kg)**
Main load	**490.5 N (50 kg)**

Grindo-Sonic

This method measures the natural vibration frequency of the abrasive product.
It is dependent upon the physical properties and the dimensions.
The results can be converted into the E - Modulus which assists in establishing a nominal value of the product hardness.