



MOHS HARDNESS TABLES

Hardness Number	Original Scale	Suggested Solution
1	Talc	Talc
2	Gypsum	Gypsum
3	Calcite	Calcite
4	Fluorite	Fluorite
5	Apatite	Apatite
6	Orthoclase	Orthoclase
7	Quartz	Vitreous Silica
8	Topaz	Quartz or Stellite
9	Corundum	Topaz
10	Diamond	Garnet
11	***	Fused Zirconia
12	***	Fused Zirconia
13	***	Silicon Carbide
14	***	Boron Carbide
15	***	Diamond

HARDNESS OF MATERIALS

Substance	Number	Substance	Number
Agate	6 - 7	Indium	1.2
Alabaster	1.7	Iridium	6 - 6.5
Alum	2 - 2.5	Iridosmium	7
Aluminum	2 - 2.9	Iron	4 - 5
Alundum	9+	Kaolinite	2.0 - 2.5
Amber	2 - 2.5	Lead	1.5
Andalusite	7.5	Lithium	0.6
Anthracite	2.2	Loess	0.3
Antimony	3.0 - 3.3	Magnesium	2.0
Apatite	5	Magnetite	6
Aragonite	3.5	Manganese	5.0
Arsenic	3.5	Marble	3 - 4
Asbestos	5	Meerschaum	2 - 3
Asphalt	1 - 2	Mica	2.8
Augite	6	Opal	4 - 6

HARDNESS OF MATERIALS (continued)

Substance	Number	Substance	Number
Barite	3.3	Orthoclase	6
Bell-Metal	4	Osmium	7.0
Beryl	7.8	Palladium	4.8
Bismuth	2.5	Phosphorus	0.5
Boric Acid	3	Platinum	4.3
Boron	9.5	Plat-Iridium	6.5
Brass	3 - 4	Potassium	0.5
Cadmium	2.0	Pumice	6
Calamine	5	Pyrite	6.3
Calcite	3	Quartz	7
Calcium	1.5	Rock Salt (Halite)	2
Carbon	10.0	Ros' Metal	2.5 - 3.0
Carborundum	9 - 10	Rubidium	0.3
Cesium	0.2	Ruthenium	6.5
Chromium	9.0	Selenium	2.0
Copper	2.5 - 3	Serpentine	3 - 4
Corundum	9	Silicon	7.0
Diamond	10	Silver	2.5 - 4
Diatomaceous Earth	1 - 1.5	Silver Chloride	1.3
Dolomite	3.5 - 4	Sodium	0.4
Emery	7 - 9	Steel	5 - 8.5
Feldspar	6	Stibnite	2
Flint	7	Strontium	1.8
Fluorite	4	Sulfur	1.5 - 2.5
Galena	2.5	Talc	1
Gallium	1.5	Tellurium	2.3
Garnet	6.5 - 7	Tin	1.5 - 1.8
Glass	4.5 - 6.5	Topaz	8
Gold	2.5 - 3	Tourmaline	7.3
Graphite	0.5 - 1	Wax	0.2
Gypsum	1.6 - 2	Wood's Metal	3
Hematite	6	Zinc	2.5
Hornblende	5.5		



COMPARISON OF HARDNESS VALUES

Material	Mohs Value	Knoop Value
Talc	1	***
Gypsum	2	32
Cadmium	***	37
Silver	***	60
Zinc	***	119
Calcite	3	135
Fluorite	4	163
Copper	***	163
Magnesia	***	370
Apatite	5	430
Nickel	***	557
Glass (Soda Lime)	***	530
Feldspar (Orthoclase)	6	560
Quartz	7	820
Chromium	***	935
Zirconia	***	1160
Beryllia	***	1250
Topaz	8	1340
Garnet	***	1360
Tungsten Carbide Alloy	***	1400 - 1800
Zirconium Boride	***	1550
Titanium Nitride	9	1800
Tungsten Carbide	***	1880
Tantalum Carbide	***	2000
Zirconium Carbide	***	2100
Alumina	***	2100
Beryllium Carbide	***	2410
Titanium Carbide	***	2470
Silicon Carbide	***	2480
Aluminum Boride	***	2500
Boron Carbide	***	2750
Diamond	10	7000