

# Mohs Scale of Mineral Hardness

The Mohs scale was devised by Friedrich Mohs in 1812. You use the scale by testing your unknown mineral against a known standard. Whichever one scratches the other is harder, and if both scratch each other they are the same hardness. The Mohs scale is strictly a relative scale. Careful tests reveal that the hardness of any crystal substance may vary on different crystal faces. Even the same face of a crystal may show a difference in hardness when scratched in different directions. Slight variations in the hardness of different varieties of the same species are also found. This is why many gems and stones have a range of hardness, it depends on the specimen.

On the chart below minerals with a higher number can scratch all minerals with a lower number. *Italicized* items are common items used to test hardness. **Bolded** items are the standard test minerals. Stones with hardness's of under 4 may not polish at all or will only take a light shine. Most of the stones hobbyists polish are in the 6 to 7 range

<b>Diamond</b>	<b>10</b>	Petrified Wood	6.5-7	Beryllonite	5.5-6	Barytocalcite	4
<b>Corundum</b>	<b>9</b>	Heliotrope	6.5-7	Elaeolite	5.5-6	Magnesite	4
Ruby	9	Jadeite	6.5-7	Hauynite	5.5-6	Rhodochrosite	4
Sapphire	9	Jasper	6.5-7	Periclase	5.5-6	Dolomite	3.5-4.5
Alexandrite	8.5	Kornerupine	6.5-7	Psilomelane	5.5-6	Chalybite	3.5-4.5
Chrysoberyl	8.5	Peridot	6.5-7	Sodalite	5.5-6	Aragonite	3.5-4
Rhodozite	8	Sard	6.5-7	Brazilianite	5.5	Azurite	3.5-4
Spinel	8	Tanzanite	6.5-7	Chromite	5.5	Cuprite	3.5-4
Taaffeite	8	Zoisite	6.5-7	Enstatite	5.5	Chalcopyrite	3.5-4
<b>Topaz</b>	<b>8</b>	Idocrase	6.5	Goldstone	5.5	Malachite	3.5-4
Yag	8	Saussurite	6.5	Leucite	5.5	Sphalerite	3.5-4
Aquamarine	7.5-8	Sinhalite	6.5	Moldavite	5.5	Cerussite	3.5
Beryl	7.5-8	Smaragdite	6.5	Natrolite	5.5	Howlite	3.5
Emerald	7.5-8	<i>Steel File</i> .....	6.5	Willemite	5.5	Witherite	3.5
Gahnite	7.5-8	Sillimanite	6-7.5	<i>Window Glass</i> .....	5.5	<i>Copper Penny</i> .....	3.5
Painite	7.5-8	Cassiterite	6-7	Scapolite	5-6.5	Coral	3-4
Phenacite	7.5-8	Epidote	6-7	Cancrinite	5-6	Pearl	3-4
Almandine	7.5	Hiddenite	6-7	Chlorastrolite	5-6	Anhydrite	3-3.5
Andalusite	7.5	Kunzite	6-7	Diopside	5-6	Celestine	3-3.5
Euclase	7.5	Unakite	6-7	Hypersthene	5-6	Barite	3
Hambergite	7.5	Amazonite	6-6.5	Limenite	5-6	<b>Calcite</b>	<b>3</b>
Uvarovite	7.5	Aventurine	6-6.5	Lapis lazuli	5-6	Wulfenite	3
<i>Ceramic Streak Plate</i> .....	7.5	Feldspar	6-6.5	Lazulite	5-6	Jet	2.5-4
Andradite	7-7.5	Benitoite	6-6.5	Psilomelane	5-6	<i>Aluminum</i> .....	2.5-3
Cordierite	7-7.5	Ekanite	6-6.5	Tantalite	5-6	Crocoite	2.5-3
Danburite	7-7.5	Labradorite	6-6.5	Turquoise	5-6	Garnierite	2.5-3
Garnet	7-7.5	Moonstone	6-6.5	Datolite	5-5.5	Phosgenite	2.5-3
Iolite	7-7.5	Nephrite-Jade	6-6.5	Obisidian	5-5.5	Silver	2.5-3
Rhodolite	7-7.5	Orthoclase	6-6.5	Sphene	5-5.5	Gold	2.5
Staurolite	7-7.5	Petalite	6-6.5	Thomasonite	5-5.5	Gaylussite	2.5
Tourmaline	7-7.5	Prehnite	6-6.5	<i>Steel Knife Blade</i> .....	5.1	Proustite	2.5
Amethyst	7	Pyrite	6-6.5	<b>Apatite</b>	<b>5</b>	Pseudophite	2.5
Citrine	7	Rutile	6-6.5	Augelite	5	Serpentine	2.5
Dumortierite	7	Strontium	6-6.5	Dioptase	5	<i>Fingernail</i> .....	2.2
Prasiolite	7	Titanate	6-6.5	Hemimorphite	5	Petoskey Stone	2-6
Rock-Crystal	7	Amblygonite	6	Smithsonite	5	Chrysocolla	2-5.5
Smoky-Quartz	7	Bytownite	6	Wardite	5	Ivory	2-4
Rose-Quartz	7	<b>Orthoclase</b>	<b>6</b>	Kyuanite	4.5-7	Amber	2-3
<b>Quartz</b>	<b>7</b>	Sanidine	6	Apophyllite	4.5-5	Meerschaum	2-2.5
Tigers-Eye	7	Thulite	6	Scheelite	4.5-5	Alabaster	2-2.5
Zircon	6.5-7.5	Tugtupite	6	Zincite	4.5-5	<b>Gypsum</b>	<b>2</b>
Agate	6.5-7	Hematite	5.5-6.5	Colemanite	4.5	Ulexite	2
Axinite	6.5-7	Opal	5.5-6.5	Kurnakovite	4.5	Vivianite	1.5-3
Chalcedony	6.5-7	Rhodonite	5.5-6.5	Purpurite	4.5	Stichtite	1.5-2.5
Chloromelanite	6.5-7	Tremolite	5.5-6.5	<i>Wire Nail</i> .....	4.5	Sulphur	1.5-2
Chrysoprase	6.5-7	Actinolite	5.5-6	Variscite	4-5	<i>#2 Pencil Lead</i> .....	1
Demantoid	6.5-7	Anatase	5.5-6	<b>Fluorite</b>	<b>4</b>	<b>Talc</b>	<b>1</b>