

**Mohs Scale - Minerals, metals, materials**

<b>Mineral Group</b>	<b>Species</b>	<b>Variety</b>	<b>Mohs Scale</b>
	Talc	white	1
	Gypsum	white, grey	2
	Stibnite	metallic grey	2
	Amber	yellow	2-2,5
	Pearl	white, pink, silver, cream, gold, green, blue, black	2,5-4,5
	Mother-of-Pearl (nacre)		2,5-4,5
Calcite	Calcite	Limestone	3
		Marble	
		colorless, yellow, red, orange, green and blue Calcite	
	Cobaltocalcite (pink, purple)		
	Magnesite	Colorless, white, grey, yellow, brown, orange, light pink	3,5-4,5
	Coral	red, pink, peach, white	3-4
	Anhydrite	Angelite (blue)	3-3,5
	Aragonite	Ammolite (fossil)	3,5-4
	Malachite	green	3,5-4
	Azurite	blue/purple	3,5-4
	Rhodochrosite	red, pink	3,5-4
	Variscite	green	3,5-5
	Fluorite	purple, pink, yellow, green, blue	4
	Pectolite	Larimar (blue)	4,5-5
Apatite	Apatite	yellow, green, blue, pink, purple, violet, colorless, cat's eye	5
Sodalite	Lazurite	Lapis Lazuli (blue)	5-5,5
	Sphene (titanite)	yellow, green, orange, brown	5-5,5

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	Natural Glass	Obsidian	5-6
		Moldavite (tektite)	
Turquoise	Turquoise	blue, green	5-6
	Charoite	purple/lavender	5-6
	Rhodonite	pink	5,5-5,7
	Opal	common, white, black, boulder, fire opal	5,5-6,5
	Diopside	Chrome (green), black star, colorless, brown, blue, violet	5,5-6,5
	Hematite	dark grey/black	5,5-6,5
	Sugilite	lavender/purple	5,5-6,5
	Pyrite		6-6,5
Feldspar	Orthoclase	Moonstone	6-6,5
		Sunstone	
	Microcline	Amazonite	
	Labradorite	Labradorite	
	Oligoclase		
	Albite		
	Prehnite	yellow, green, grey, colorless, cat's eye	6-6,5
Amphibole	Actinolite/tremolite (jade)	Nephrite (green, reddish-brown, orange, yellow, black, grey, white)	6-6,5
Pyroxene	Jadeite (jade)	Jadeite (green, lavender, reddish-brown, orange, yellow, black, grey, white)	6,5-7

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Zircon	Zircon	blue, green, yellow, orange, brown, colorless	6-6,5
	Benitoite	blue	6-6,5
Garnet	Andratite	Demantoid (green)	6-7
		Topazolite (yellow/orange)	
		Melanite (black)	
	Spessartine	Kashmirine (orange)	
		Little Three Mine (orange)	
		Mandarin Garnet (orange)	
	Almandine	purple	
	Pyrope-Almandine	Rhodolite (pink)	
	Pyrope	red	
	Pyrope-spessartine	color change	
		Malaia Garnet (orange/pink-orange)	
	Grossular-andratite	Mali Garnet (green, yellow)	
	Grossular	Hessonite (orange, yellow)	
		Tsavorite (green)	
green, white, pink			
Epidote	Zoisite	Tanzanite (blue/purple)	6-7
		Thulite (pink)	
		Green, yellow, orange Zoisite	
Olivine	Forsterite	Peridot (green) (aka Chrysolite)	6,5-7
Pyroxene	Spodumene	Kunzite (pink/purple)	6,5-7
		Hiddenite (green) (aka green Spodumene)	

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Mineral Group	Species	Variety	Mohs Scale
	Chalcedony (Cryptocrystalline/ microcrystalline quartz)	Agate	6,5-7
		Bloodstone, heliotrope, plasma	
		Carnelian Orange/red)	
		Chalcedony (white, grey, blue)	
		Chrysocolla quartz (blue-green)	
		Chrysoprase (green)	
		Jasper	
		Onyx, Sardonyx	
		Sard (yellow, brown)	
	Andalusite	pleochroic (green, red, yellow, brown)	6,5-7,5
Quartz	Crystallized Quartz	Amethyst (purple)	7
		Ametrine (purple/yellow)	
		Citrine (yellow)	
		Hawk's Eye	
		Quartz Cat's Eye	
		Tiger's Eye	
		Rock Crystal(colorless)	
		Rose Quartz (pink)	
		Smoky Quartz (brown)	
		Aventurine (green)	
	Cordierite	lolite (dark blue/violet)	7-7,5

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Tourmaline	Elbaite	Indicolite (blue)	7-7,5
		Verdelite (green)	
		Rubellite (pink)	
		red, yellow, orange, brown, colorless, cat's eye	
		Liddicoatite (green, red, pink, purple)	
	Dravite (brown)		
	Schorl (black)		
Beryl	Beryl	Emerald (green)	7,5-8
		Green Beryl	
		Aquamarine (pale blue)	
		Maxixe (blue)	
		Heliodor (yellow)	
		Morganite (pink, orange, purple)	
		Goshenite (colorless)	
		Bixbite (red)	
Topaz	Topaz	pink, red, yellow, orange, blue, green, colorless	8
Spinel	Spinel	red, pink, orange, blue, black, star	8
Chrysoberyl	Chrysoberyl	Alexandrite (color change - green to red)	8,5
		yellow, green or brown Chrysoberyl	
		Cat's Eye Chrysoberyl	

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Mineral Group	Species	Variety	Mohs Scale
Corundum	Corundum	Ruby (red, star)	9
		Sapphire (star, blue, pink, orange, purple, yellow, green, colorless)	
		Padparadscha (pinkish-orange)	
	Moissanite	colorless, green, blue, red, pink, purple	9,5
Diamond	Diamond	Colorless, white, yellow, and brown, grey, and black	10

Metal	Mohs Scale
Lead	1,5
Tin	
Zinc	2,5
gold	2,5-3
silver	
aluminum	
copper	3
brass	
bronze	
nickel	4
platinum	4-4,5
iron	4-5
steel	
Palladium	4,75
Rhodium	6
Titanium	
Hardened Steel	7-8
Tungsten	7,5
Tungsten carbide	8,5-9

### Mohs Scale - Minerals, metals, materials

Material	Mohs scale
Fingernail	2,5
Knife blade	5,5
Glass	6-7
Emery sandpaper	6-8
Hardened steel file	7
aluminum oxide abrasive	9
silicon carbide sandpaper (wet)	9,5

**Sources:**

- Gemstone buying Guide - Renée Newman GG, 2007;
- Minerals.net;
- American Federation of Mineralogical Societies, [http://www.amfed.org/t\\_mohs.htm](http://www.amfed.org/t_mohs.htm);
- Jewelry Notes, <http://www.jewelrnotes.com/the-mohs-scale-of-hardness-for-metals-why-it-is-important/>