





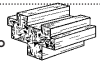




## Properties of Common Minerals

LUSTER	HARD-NESS	CLEAVAGE FRACTURE	COMMON COLORS	DISTINGUISHING CHARACTERISTICS	USE(S)	MINERAL NAME	COMPOSITION*
<b>Metallic Luster</b>	1–2	✓	silver to gray	black streak, greasy feel	pencil lead, lubricants	<b>Graphite</b>	C
	2.5	✓	metallic silver	very dense (7.6 g/cm <sup>3</sup> ), gray-black streak 	ore of lead	<b>Galena</b>	PbS
	5.5–6.5	✓	black to silver	attracted by magnet, black streak	ore of iron	<b>Magnetite</b>	Fe <sub>3</sub> O <sub>4</sub>
	6.5	✓	brassy yellow	green-black streak, cubic crystals 	ore of sulfur	<b>Pyrite</b>	FeS <sub>2</sub>
<b>Either</b>	1–6.5	✓	metallic silver or earthy red	red-brown streak	ore of iron	<b>Hematite</b>	Fe <sub>2</sub> O <sub>3</sub>
<b>Nonmetallic Luster</b>	1	✓	white to green	greasy feel	talcum powder, soapstone	<b>Talc</b>	Mg <sub>3</sub> Si <sub>4</sub> O <sub>10</sub> (OH) <sub>2</sub>
	2	✓	yellow to amber	easily melted, may smell	vulcanize rubber, sulfuric acid	<b>Sulfur</b>	S
	2	✓	white to pink or gray	easily scratched by fingernail	plaster of paris and drywall	<b>Gypsum (Selenite)</b>	CaSO <sub>4</sub> •2H <sub>2</sub> O
	2–2.5	✓	colorless to yellow	flexible in thin sheets 	electrical insulator	<b>Muscovite Mica</b>	KAl <sub>3</sub> Si <sub>3</sub> O <sub>10</sub> (OH) <sub>2</sub>
	2.5	✓	colorless to white	cubic cleavage, salty taste 	food additive, melts ice	<b>Halite</b>	NaCl
	2.5–3	✓	black to dark brown	flexible in thin sheets 	electrical insulator	<b>Biotite Mica</b>	K(Mg,Fe) <sub>3</sub> AlSi <sub>3</sub> O <sub>10</sub> (OH) <sub>2</sub>
	3	✓	colorless or variable	bubbles with acid 	cement, polarizing prisms	<b>Calcite</b>	CaCO <sub>3</sub>
	3.5	✓	colorless or variable	bubbles with acid when powdered	source of magnesium	<b>Dolomite</b>	CaMg(CO <sub>3</sub> ) <sub>2</sub>
	4	✓	colorless or variable	cleaves in 4 directions	hydrofluoric acid	<b>Fluorite</b>	CaF <sub>2</sub>
	5–6	✓	black to dark green	cleaves in 2 directions at 90° 	mineral collections	<b>Pyroxene (commonly Augite)</b>	(Ca,Na)(Mg,Fe,Al)(Si,Al) <sub>2</sub> O <sub>6</sub>
	5.5	✓	black to dark green	cleaves at 56° and 124° 	mineral collections	<b>Amphiboles (commonly Hornblende)</b>	CaNa(Mg,Fe) <sub>4</sub> (Al,Fe,Ti) <sub>3</sub> Si <sub>6</sub> O <sub>22</sub> (O,OH) <sub>2</sub>
	6	✓	white to pink	cleaves in 2 directions at 90°	ceramics and glass	<b>Potassium Feldspar (Orthoclase)</b>	KAlSi <sub>3</sub> O <sub>8</sub>
	6	✓	white to gray	cleaves in 2 directions, striations visible	ceramics and glass	<b>Plagioclase Feldspar (Na-Ca Feldspar)</b>	(Na,Ca)AlSi <sub>3</sub> O <sub>8</sub>
	6.5	✓	green to gray or brown	commonly light green and granular	furnace bricks and jewelry	<b>Olivine</b>	(Fe,Mg) <sub>2</sub> SiO <sub>4</sub>
	7	✓	colorless or variable	glassy luster, may form hexagonal crystals 	glass, jewelry, and electronics	<b>Quartz</b>	SiO <sub>2</sub>
7	✓	dark red to green	glassy luster, often seen as red grains in NYS metamorphic rocks	jewelry and abrasives	<b>Garnet (commonly Almandine)</b>	Fe <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub>	

\*Chemical Symbols: Al = aluminum    Cl = chlorine    H = hydrogen    Na = sodium    S = sulfur  
 C = carbon    F = fluorine    K = potassium    O = oxygen    Si = silicon  
 Ca = calcium    Fe = iron    Mg = magnesium    Pb = lead    Ti = titanium

✓ = dominant form of breakage