MENU

MT1: Minerals with Metallic Luster or Dull (Tarnished) Metallic Luster

Hardness	*Streak*	*Cleavage*	*Other*	*Mineral*
< 5.5 (does not scratch glass)	Black, green-black, brown-black, or gray	One (possibly visible)	Gray to black in color; dull luster; greasy feel	**Graphite** C
		Three	Silvery gray in color; cubic crystals are common	**Galena** PbS
		None	Brown to brownish black in color; submetallic luster common, weakly magnetic	**Chromite** $FeCr_2O_4$
		None	Golden yellow to greenish yellow in color; massive	**Chalcopyrite** $CuFeS_2$
	Yellow-Brown	None	Dark brown to black in color; massive or rounded forms with fiberous layers	**Geothite** FeO(OH)
	Copper-red	None	Copper to brown in color but may have a green coating; malleable	**Native Copper** Cu
>5.5 (scratches glass)	Black or Green-black	None	Brass-yellow in color; massive or as crystals	**Pyrite** FeS_2
	Black	None	Dark gray to black in color; dull luster	**Magnetite** Fe_3O_4
	Red-brown	None	Steel gray to dull red in color; massive or may have tiny flakes	**Hematite** Fe_2O_3

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MT1: Minerals with Metallic Luster or Dull (Tarnished) Metallic Luster

MT2: Minerals with Nonmetallic Luster, hardness >5.5; streak white/white-like; no cleavage

MT3: Minerals with Nonmetallic Luster, hardness >5.5; streak white/white-like

MT4: Minerals with Nonmetallic Luster, hardness <5.5; streak colored

MT5: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like, none, indistinct, or poor

MT6: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like

MT2: Minerals with Nonmetallic Luster

- Hardness >5.5
- Streak that is white or appears white like
- *No cleavage*

Cleavage	*Other*	*Mineral*
None	Brown, pink, blue or gray in color; six-sided prismatic crystals; ruby (red color) and sapphire (blue) are gem varieties of this mineral	**Corundum** Al_2O_3
	Black, pink, blue, green, brown in color; vitreous luster; thin crystals with triangular cross sections and striated faces	**Tourmaline** Complex hydrous silicate
	Reddish brown, yellowish tan in color; vitreous to resinous luster; twelve-sided crystals; broken surfaces may resemble cleavages	**Garnet** Ca-Mg-Fe-Al silicate
	Red-brown, brownish-black in color; vitreous, resinous or dull luster; prismatic and X or cross-shaped crystals	**Staurolite** Hydrous Fe-Al silicate
	Varied appearance with larger crystalline varieties exhibiting a clear, milky, white, purple, smokey or pink color; vitreous luster; Small crystalline varieties exhibiting gray, black, brown or multicolor banded appearance; vitreous luster	**Quartz** SiO_2
	Olive-green to yellow-green in color; vitreous to dull luster	**Olivine** $(Mg,Fe)SiO_4$
	Colorless, white, or pale shades of yellow, green, red or blue in color; vitreous to resinous luster	**Opal** SiO_2 nH_2O

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MT4: Minerals with Nonmetallic Luster, hardness <5.5; streak colored

MT5: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like, none, indistinct, or poor

MT6: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like

MT3: Minerals with Nonmetallic Luster

- Hardness >5.5
- Streak that is white or appears white like

Cleavage	*Other*	*Mineral*
One	Colorless, yellow, brown, pink, blue in color; vitreous luster; elongated crystals with striated faces and pointed ends	**Topaz** $Al_2SiO_4(OH,F)_2$
	Bluish green, yellow, white, pink in color; elongated, six-sided crystal prisms with flat ends	**Beryl** $Be_3Al_2(Si_6O_{18})$
	Light blue to greenish blue in color; vitreous luster; blade-shaped crystals	**Kyanite** Al_2SiO_5
	White, pale green, brown in color; long slender crystals often in groups of parallel crystals	**Sillimanite** Al_2SiO_5
Two	Salmon-pink, white, gray, green in color; vitreous luster; nearly right-angle or 90 degree cleavage	**Potassium Feldspar** $KAlSi_3O_8$
	White, dark gray or sometimes buff in color; vitreous luster; nearly right-angle or 90 degree cleavage; straight or parallel striations may show	**Plagioclase Feldspar** $NaAlSi_3O_8$ to $CaAl_2Si_2O_8$
	Pistachio green, yellowish green in color; elongated crystals or finely crystalline masses	**Epidote** Hydrous Ca-Fe-Al silicate
	Black; vitreous luster; possible faint green-gray streak; two perfect cleavages at 124 degrees and 56 degrees; stepped cleavage faces	**Hornblend** Hydrous Na-Ca-Mg-Fe-Al silicate
	Black, dark green in color; vitreous to dull in luster; two imperfect cleavages meeting at nearly 90 degrees (see also table MT6)	**Augite** Ca-Mg-Fe silicate

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MT4: Minerals with Nonmetallic Luster, hardness <5.5; streak colored

MT5: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like, none, indistinct, or poor

MT6: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like

MT4: Minerals with Nonmetallic Luster

- Hardness <5.5
- Streak that is colored

Streak	*Cleavage*	*Other*	*Mineral*
Yellow	None	Yellow in color; resinous or vitreous luster	**Sulfur** S
	Six (possibly visible)	Light yellow, yellowish brown, black in color; resinous or vitreous luster; faint odor	**Sphalerite** ZnS
Blue	None	Azure blue in color; occurs as coatings, masses or small crystals	**Azurite** $Cu_3(CO_3)_2(OH)_2$
Green	None	Bright green; occurs as coatings, masses or small crystals	**Malachite** $Cu_2CO_3(OH)_2$

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MT5: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like, none, indistinct, or poor

MT6: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like

MT5: Minerals with Nonmetallic Luster

- Hardness <5.5
- Streak that is faint, white or appears white-like

Cleavage	*Other*	*Mineral*
None or Indistinct	White, gray, apple green in color; pearly luster; greasy feel; may have a slight streak (see also table MT6)	**Talc** $Mg_3Si_4O_{10}(OH)_2$
	White in color; satiny or silky luster; fibrous fracture (see also table MT6)	**Gypsum** $CaSO_4\ 2H_2O$
	White in color; dull luster; greasy feel; earthy odor; powdery	**Kaolinite** $Al_2Si_2O_5(OH)_4$
	Multicolored green, gray, black in color; dull to greasy luster; slight greasy feel; massive fibrous	**Serpentine** $Mg_3Si_2O_5(OH)_4$
Poor cleavage	Light green to medium green, brown, yellow in color; vitreous luster; six-sided crystals common; may show one poor cleavage	**Apatite** $Ca_5(PO_4)_3(F,Cl,OH)$
	Buff, gray, white, pinkish in color; small, rhombohedral crystals or massive; three cleavages not at 90 degrees but may be indistinct; reacts slowly with acid or not at all unless powdered (see also table MT6)	**Dolomite** $CaMg(CO_3)_2$

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MT6: Minerals with Nonmetallic Luster; hardness <5.5; streak faint, white/white-like

MT6: Minerals with Nonmetallic Luster

- Hardness <5.5
- Streak that is faint, white or appears white-like

Cleavage	*Other*	*Mineral*
one	White, gray, apple green in color; pearly luster; greasy feel; may have a slight streak (see also table MT5)	**Talc** $Mg_3Si_4O_{10}(OH)_2$
	White in color; satiny or silky luster; fibrous fracture (see also table MT5)	**Gypsum** $CaSO_4\ 2H_2O$
	Green, blackish green in color; dull, vitreous or pearly luster; may have a faint yellow streak; cleavage flakes are flexible	**Chlorite** Hydrous Mg-Fe-Al silicate
	Black, brownish black in color; vitreous luster; may have a faint black streak; cleavage surfaces are wavy; transparent; flexible and elastic	**Biotite** Hydrous K-Mg-Fe-Al silicate
	Colorless, silvery white, brownish silvery white in color; vitreous luster; transparent; flexible and elastic	**Muscovite** Hydrous K-Al silicate
Two	Black in color; vitreous luster; may have a faint green-gray streak; two perfect cleavages with angles at 124 degrees and 56 degrees; splintery appearance	**Hornblende** Hydrous Na-Ca-Mg-Fe-Al
	Black, dark green in color; vitreous to dull in luster; imperfect cleavages at 90 degrees (see also table MT3)	**Augite** Ca-Mg-Fe silicate
Three	Clear, gray, red in color; three perfect cleavages at 90 degrees; salty taste	**Halite** NaCl
	Clear, white, light gray in color; vitreous or pearly luster; brittle sheets; two of the cleavages are poor	**Gypsum** $CaSO_4\ 2H_2O$
	Colorless, white in color; tabular or rose-like array of crystals; cleavages at 90 degrees	**Barite** $BaSO_4$
	Clear, white, possible other colors; vitreous luster; three perfect cleavages form a rhombus; reacts strongly to acid	**Calcite** $CaCO_3$
	Buff, gray, white, pinkish in color; small, rhombohedral crystals or massive; three cleavages not at 90 degrees but may be indistinct; reacts slowly with acid or not at all unless powdered (see also table MT5)	**Dolomite** $CaMg(CO_3)_2$
Four	Purple, green, blue, yellow, clear in color; vitreous luster; perfect cleavage up to four directions; octahedral cleavage or may occur as cubic crystals	**Fluorite** CaF_2