

NONMETALLIC *Light* MINERALS (last updated 2023)

Name	Formula	Luster/Color	Streak	Hard	Breakage	Mineral Group	Mineral Structure	Specific Gravity	Uses & Special properties
Alabaster <i>Gypsum</i> #122 #333	CaSO ₄ * 2H ₂ O	<i>Waxy to earthy</i> : white, gray, colorless, brown	White	2.0	Fracture, massive (Cleavage clear)	Sulfate	Monoclinic	2.3	Alabaster (waxy massive) Used in Plaster of Paris, Dry wall, Plaster on walls
Amethysts /crystal Quartz #244	SiO ₂	<i>Glassy</i> : vary in color purple colorless	Colorless	7.0	Cleavage	Silicate	Hexagonal	2.6	Amethysts (purple color) Quartz crystals (cubic zirconica) Most common mineral
Beryl #?	Be ₃ Al ₂ Si ₆ O ₁₈	<u><i>Vitreous to resinous</i></u> green, colorless, blue, yellow, red (the rarest), and white	White	7.5–8	Fracture;	Silicate	Hexagonal	2.76	Increasing alkali content. Emerald is green beryl Aquamarine is a blue or cyan variety of beryl golden beryl" called <i>heliodor</i> Colorless beryl is called <i>goshenite</i> Morganite, also known as "pink beryl" Red beryl ("bixbite") as "red emerald" or "scarlet emerald"
Calcite #93	Ca(CO ₃) ₂	<i>Glassy – earthy</i> : colorless, white, pale yellow	White, Can be colorless	3.0	EVEN Cleavage; (Conchoidal fracture)	Carbonate	Hexagonal Rhombohedral	2.7	(<i>Effervesces</i>) or Fizzes in HCl; used in optical equipment; some fluorescent; used in cement & lime some varieties used in optics.
Diamond	C	<i>Clear, pink, blue, yellow</i>	None/white	10	Even	Native element	Isometric cubic	3.5-3.6	Hardness mineral, heat conductivity, crystal form
Feldspar (Orthoclase) #254	KAlSi ₃ O ₈	<i>Glassy</i> : white, to gray, green, yellow	Colorless sometimes White	6.0	2 cleavage plane meet at 90° angles Conchoidal	Silicate	Monoclinic	2.5-2.6	Used in scouring powders, porcelains ceramics, glazes; insoluble in acid
Feldspar (<i>Microcline</i>) #355	KAlSi ₃ O ₈	<i>Glossy</i> : pink, red, white, or crème	Colorless sometimes White	6.0	2 cleavage plane meet at 90° angle	Silicate	Monoclinic	2.55-2.63	"Tartan twinning" structure porcelains ceramics Used in scouring powders, porcelains ceramics, glazes; insoluble in acid
Feldspar (<i>Plagioclase</i>) #259	NaAlSi ₃ O ₈ CaAl ₂ Si ₃ O ₈	<i>Glassy</i> : gray, green, white, or reddish brown	White	6.0-6.5	2 cleavage plane meet at 86° angle	Silicate	Triclinic	2.62	Used in ceramics; Striations present on some faces. porcelains ceramics

NONMETALLIC *Light* MINERALS (last updated 2023)

Name	Formula	Color	Streak	Hard	Breakage	Mineral Group	Mineral Structure	Specific Gravity	Uses & Special properties
Fluorite #50	CaF ₂	<i>Glassy:</i> green, yellow, bluish green, purple, clear, black	Colorless, white	4.0	Fracture; perfect cleavage in 4 directions	Halides	Octahedral, isometric	3.18	Some types fluorescence; used in making steel; noted for its color, concentrated sulfuric acid gives off fumes (hydrofluoric acid that attacks glass
Halite #47	NaCl	Colorless, red, white, blue, pinkish	Colorless/ White	2.5	Perfect cleavage	Halides	Cubic	2.1-2.3	Table salt rock is called Rock salt; Taste is unique
Milky Quartz #244	SiO ₂	<i>Glassy:</i> white colorless	Colorless	7.0	Conchodial; Shell like fracture	Silicate	Hexagonal	2.6	Used in optical equipment, glass manufacture electronic equipment,
Mica (Muscovite) #225	KAl ₃ Si ₃ O ₁₀ (OH) ₂	<i>Silky, pearly, glassy:</i> white, light gray, yellow, rose, green	Colorless	2.5-3.5	Basal cleavage	Silicate	Monoclinic	2.8-2.9	Used as an insulator in electrical equipment; breaks into thin elastic sheets; used as a lubricant & fireproofing material
Rose Quartz #244	SiO ₂	<i>Glassy:</i> clear, rose	Colorless	7.0	Shell like fracture	Silicate	Hexagonal	2.6	Used in optical equipment, glass manufacture electronic equipment,
Satin Spar <u>Gypsum</u>	CaSO ₄ * 2H ₂ O	<i>Dull Silky:</i> white, gray, colorless, brown	White	2.0	Basal cleavage	Sulfate	Monoclinic	2.3	Satin Spar (fibrous lines Twinning streaks Used in Plaster of Paris, Dry wall, Plaster on walls
Selenite <u>Gypsum</u>	CaSO ₄ * 2H ₂ O	<i>Glassy to dull:</i> white, gray, colorless, brown, yellow orange	White	2.0	Cleavage 3 directions	Sulfate	Monoclinic	2.3	Selenite (cleavage) Transparent similar to Halite Used in Plaster of Paris, Dry wall, Plaster on walls
Sulfur #12 (Sulphur)	S	<i>Resinous;</i> Yellow	White to yellow	1.5-2.5	Uneven shell like fracture conchoidal	Sulfide	Orthorhombic	1.5-2.5	Used in vulcanization of rubber, medicine, production of sulfuric acid; Smell; Used in fertilizers & insecticides
Talc #224	Mg ₃ (OH) ₂ Si ₂ O ₁₀	<i>Pearly to greasy waxy:</i> white, apple green	White	1.0	Uneven fracture Lamerer	Silicate	Monoclinic	2.6-2.8	Used for talcum powder; Waxy, soapy, greasy feeling; Cosmetics and some papers