

# IDENTIFICATION OF MINERALS



## Physical Properties of Bauxite

<p><b>Color</b></p>	<p>White, gray, sometimes stained yellow, orange, red, pink, or brown by iron or included iron minerals</p>
<p><b>Streak</b></p>	<p>Usually white, but iron stain can discolor</p>
<p><b>Luster</b></p>	<p>Dull, earthy</p>
<p><b>Cleavage</b></p>	<p>None</p>
<p><b>Mohs Hardness</b></p>	<p>1 to 3</p>
<p><b>Specific Gravity</b></p>	<p>2 to 2.5</p>

Calcite



## Physical Properties of Calcite

<b>Color</b>	Colorless or white, also gray, yellow, green
<b>Streak</b>	White
<b>Luster</b>	Vitreous to pearly on cleavage surfaces
<b>Cleavage</b>	three directions with angle of $74^{\circ} 55'$
<b>Mohs Hardness</b>	3 (defining mineral)
<b>Specific Gravity</b>	2.71



Physical Properties of Chalcopyrite	
Color	Brass yellow, may have iridescent purplish tarnish.
Streak	Greenish black
Luster	Metallic
Cleavage	Indistinct
Mohs Hardness	3.5
Specific Gravity	4.1 – 4.3



Orthoclase



Na-Plagioclase

Physical Properties of Feldsper	
Color	pink, white, gray, brown
Streak	white
Luster	Vitreous
Cleavage	two or three
Mohs Hardness	6.0–6.5
Specific Gravity	2.55–2.76



## Physical Properties of Galena

Color	Lead gray and silvery
Streak	Lead gray
Luster	Metallic on cleavage planes
Cleavage	Cubic perfect
Mohs Hardness	2.5–2.75
Specific Gravity	7.2–7.6



## Physical Properties of Gypsum

Color

Colorless to white; may be yellow, tan, blue, pink, brown, reddish brown or gray due to impurities

Streak

White

Luster

Vitreous to silky, pearly, or waxy

Cleavage

Perfect

Mohs Hardness

1.5–2

Specific Gravity

2.31–2.33

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Physical Properties of HEMATITE	
Color	Metallic gray, dull to bright red
Streak	Bright red to dark red
Luster	Metallic to splendent
Cleavage	None
Mohs Hardness	5.5–6.5
Specific Gravity	5.26





Physical Properties of MICA	
Color	purple, rosy, silver, gray ( <a href="#">lepidolite</a> ); dark green, brown, black ( <a href="#">biotite</a> ); yellowish-brown, green-white ( <a href="#">phlogopite</a> ); colorless, transparent ( <a href="#">muscovite</a> )
Streak	White, colorless
Luster	pearly, vitreous
Cleavage	perfect
Mohs Hardness	2.5–4
Specific Gravity	2.8–3.1



Physical Properties of QUARTZ	
Color	Colorless
Streak	White
Luster	Vitreous – waxy to dull when massive
Cleavage	Indistinct
Mohs Hardness	7 – lower in impure varieties
Specific Gravity	2.65; variable 2.59–2.63 in impure varieties



Physical Properties of TALC	
Color	Light to dark green, brown, white, grey
Streak	White jot to pearl
Luster	Waxlike or pearly
Cleavage	Perfect
Mohs Hardness	1
Specific Gravity	2.58 to 2.83



## Physical Properties of TOURMALINE

Color	Most commonly black, but can range from colorless to brown, red, orange, yellow, green, blue, violet, pink, or hues in between; can be bi-colored, or even tri-colored; rarely can be neon green or electric blue
Streak	White
Luster	Vitreous, sometimes resinous
Cleavage	Indistinct
Mohs Hardness	7–7.5
Specific Gravity	3.06



Physical Properties of MAGNETITE	
Color	Black, gray with brownish tint in reflected sun
Streak	Black
Luster	Metallic
Cleavage	Indistinct
Mohs Hardness	5.5–6.5
Specific Gravity	5.17–5.18