

# The Common Minerals (Table) : Notes-20

## The common minerals (non-silicates)

<u>Mineral</u>	<u>Hardness</u>	<u>Specific Gravity</u>	<u>Composition</u>
Apatite	5.0	3.2	$\text{Ca}_5(\text{PO}_4)_3$
Barite	3.3	4.5	$\text{BaSO}_4$
Bauxite	2.0	2.3	$\text{Al}(\text{OH})_3$
Borax	2.3	1.7	$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$
Bornite	3.0	5.7	$\text{Cu}_5\text{FeS}_4$
Calcite	3.0	2.7	$\text{CaCO}_3$
Cassiterite	6.5	7.0	$\text{SnO}_2$
Chalcopyrite	3.8	4.3	$\text{CuFeS}_2$
Copper (native)	2.8	8.9	$\text{Cu}$
Corundum	9.0	4.0	$\text{Al}_2\text{O}_3$
Diamond	10.0	3.5	$\text{C}$
Dolomite	3.8	2.9	$\text{CaMg}(\text{CO}_3)_2$
Fluorite	4.0	3.2	$\text{CaF}_2$
Galena	2.7	7.4	$\text{PbS}$
Graphite	1.5	2.2	$\text{C}$
Gypsum	2.0	2.3	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
Halite	2.5	2.2	$\text{NaCl}$
Hematite	6.0	5.3	$\text{Fe}_2\text{O}_3$

Limonite	5.3	3.8	$\text{FeO(OH)} \cdot n\text{H}_2\text{O}$
Magnetite	6.0	5.2	$\text{Fe}_3\text{O}_4$
Malachite	3.8	4.0	$\text{Cu}_2\text{CO}_3(\text{OH})_2$
Pyrite	6.3	5.0	$\text{FeS}_2$
Sphalerite	3.8	4.0	$\text{ZnS}$
Sulfur (native)	2.0	2.0	S

**The common minerals (silicates)**

Augite	5.5	3.4	complex silicate (contains Fe)
Chlorite	2.5	3.0	complex silicate (contains Fe)

**Feldspar**

Orthoclase	6.0	2.6	$\text{KAlSi}_3\text{O}_8$ (white or pink)
Plagioclase	6.0	2.7	$\text{NaAlSi}_3\text{O}_8$ (white) $\text{CaAl}_2\text{Si}_2\text{O}_8$ (dark)
Garnet	7.0	4.0	$\text{XAl}_2\text{Si}_3\text{O}_{12}$ X = (Mg,Fe,Mn,Ca)
Hornblende	5.5	3.2	Xsilicate X = (Mg,Fe,Mn,Ca)
Kaolinite	2.3	2.6	$\text{Al}_2\text{Si}_2\text{O}_5(\text{OH})_4$

**Mica**

Biotite (dark)	2.8	3.0	complex silicate (contains Fe)
Muscovite (light)	2.5	2.8	$\text{KAl}_3\text{Si}_3\text{O}_{10}(\text{OH})_2$
Olivine	6.8	3.8	$\text{X}_2\text{SiO}_4$ X = (Mg,Fe)

Quartz	7.0	2.7	SiO <sub>2</sub>
Talc	1.0	2.7	Mg <sub>3</sub> Si <sub>4</sub> O <sub>10</sub> (OH) <sub>10</sub>
Topaz	8.0	3.5	Al <sub>2</sub> SiO <sub>4</sub> (F,OH) <sub>2</sub>
Tourmaline	7.3	3.2	complex silicate (contains Fe)