

**EENS 212**  
**FORMULAE OF COMMON MINERALS**

<u>ORTHOSILICATES (NESOSILICATES)</u>		<u>SHEET SILICATES (PHYLLOSILICATES)</u>	
Forsterite	$Mg_2SiO_4$	Muscovite	$KAl_3Si_3O_{10}(OH)_2$
Fayalite	$Fe_2SiO_4$	Biotite	$K(Mg,Fe)_3AlSi_3O_{10}(OH)_2$
Zircon	$ZrSiO_4$	Talc	$Mg_3Si_4O_{10}(OH)_2$
Sphene	$CaTiSiO_4$	Chlorite	$(Mg,Fe,Al)_6(Si,Al)_4O_{10}(OH)_8$
Pyrope	$Mg_3Al_2Si_3O_{12}$	Serpentine	$Mg_3Si_2O_5(OH)_4$
Almandine	$Fe_3Al_2Si_3O_{12}$	Kaolinite	$Al_2Si_2O_5(OH)_4$
Grossularite	$Ca_3Al_2Si_3O_{12}$		
Sillimanite	$Al_2SiO_5$	<u>FRAMEWORK SILICATES</u> <u>(TECTOSILICATES)</u>	
Kyanite	$Al_2SiO_5$	Anorthite	$CaAl_2Si_2O_8$
Andalusite	$Al_2SiO_5$	Albite	$NaAlSi_3O_8$
Staurolite	$(Fe,Mg)_2Al_9Si_4O_{22}(OH)_2$	Sanidine	$KAlSi_3O_8$
Topaz	$Al_2SiO_4(OH)_2$	Orthoclase	$KAlSi_3O_8$
<u>SOROSILICATES</u>		Quartz	$SiO_2$
Lawsonite	$CaAl_2Si_2O_7(OH)_2 \cdot H_2O$	Cristobalite	$SiO_2$
Epidote	$Ca_2Fe^{+3}Al_2Si_3O_{12}(OH)$	Tridymite	$SiO_2$
Clinozoisite	$Ca_2Al_3Si_3O_{12}(OH)$	Nepheline	$NaAlSiO_4$
		Kalsilite	$KAlSiO_4$
<u>CYCLOSILICATES</u>		Leucite	$KAlSi_2O_6$
Beryl	$Be_3Al_2Si_6O_{18}$	<u>OXIDES</u>	
Cordierite	$Al_4(Mg,Fe)_2Si_5O_{18}$	Periclase	$MgO$
<u>CHAIN SILICATES (INOSILICATES)</u>		Corundum	$Al_2O_3$
Enstatite	$MgSiO_3$	Hematite	$Fe_2O_3$
Ferrosilite	$FeSiO_3$	Magnetite	$Fe_3O_4$
Hypersthene	$(Mg,Fe)SiO_3$	Ilmenite	$FeTiO_3$
Diopside	$CaMgSi_2O_6$	Rutile	$TiO_2$
Hedenbergite	$CaFeSi_2O_6$	Spinel	$MgAl_2O_4$
Acmite	$NaFe^{+3}Si_2O_6$	<u>HYDROXIDES</u>	
Jadeite	$NaAlSi_2O_6$	Brucite	$Mg(OH)_2$
Wollastonite	$CaSiO_3$	Gibbsite	$Al(OH)_3$
Tremolite	$Ca_2Mg_5Si_8O_{22}(OH)_2$	Goethite	$FeO \cdot OH$
Actinolite	$Ca_2Fe_5Si_8O_{22}(OH)_2$		
Hornblende	$(Na,K)_{0-1}Ca_2(Mg,Fe,Al)_5Si_{6-7}Al_{2-1}O_{22}(OH,F)_2$		

	<u>SULFIDES</u>		<u>CARBONATES</u>
Pyrite	FeS <sub>2</sub>	Calcite	CaCO <sub>3</sub>
Chalcopyrite	CuFeS <sub>2</sub>	Siderite	FeCO <sub>3</sub>
Sphalerite	ZnS	Magnesite	MgCO <sub>3</sub>
Galena	PbS	Dolomite	CaMg(CO <sub>3</sub> ) <sub>2</sub>
Cinnabar	HgS		
Covelite	CuS		<u>PHOSPHATES</u>
Bornite	Cu <sub>5</sub> FeS <sub>4</sub>	Apatite	Ca <sub>5</sub> (PO <sub>4</sub> ) <sub>3</sub> (OH,F,CL)
Molybdenite	MoS <sub>2</sub>		
	<u>SULFATES</u>		<u>HALIDES</u>
Anhydrite	CaSO <sub>4</sub>	Fluorite	CaF <sub>2</sub>
Barite	BaSO <sub>4</sub>	Halite	NaCl
Gypsum	CaSO <sub>4</sub> ·2H <sub>2</sub> O	Sylvite	KCl
Anhydrite	CaSO <sub>4</sub>		

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