

Framework Silicates	End Member	Abbr.	Formula	Related Minerals
Quartz	quartz	Qtz	SiO ₂	amethyst, chalcedony, agate, chert, jasper, onyx, flint, opal, moganite
Silica polymorphs			SiO ₂	tridymite, cristobalite, coesite, stishovite
Alkali Feldspar	orthoclase albite	Or Ab	KAlSi ₃ O ₈ NaAlSi ₃ O ₈	sanidine, orthoclase, microcline, adularia, albite, perthite, anorthoclase
Plagioclase Feldspar	albite anorthite	Ab An	NaAlSi ₃ O ₈ CaAl ₂ Si ₂ O ₈	albite, oligoclase, andesine, laboradorite, bytownite, anorthite
Nepheline	nepheline kalsilite	Ne Kls	NaAlSiO ₄ KAlSiO ₄	
Leucite	leucite	Lct	KAlSi ₂ O ₆	
Sodalite Group	sodalite nosean	Sdl Nsn	Na ₈ (Al ₆ Si ₆ O ₂₄)Cl ₂ Na ₈ (Al ₆ Si ₆ O ₂₄)SO ₄	haiyue, cancrinite
Zeolite Group				analcite, natrolite, thompsonite, phillipsite, heulandite, stilbite, etc.

Sheet Silicates				
Muscovite	muscovite paragonite margarite	Ms Pg Mrg	K ⁺ Al ₂ (AlSi ₃ O ₁₀)(OH) ₂ Na ⁺ Al ₂ (AlSi ₃ O ₁₀)(OH) ₂ Ca ²⁺ Al ₂ (Al ₂ Si ₂ O ₁₀)(OH) ₂	sericite, phengite
Biotite	phlogopite annite clintonite	Phl Ann Cli	KMg ₃ (AlSi ₃ O ₁₀)(OH) ₂ KFe ₃ (AlSi ₃ O ₁₀)(OH) ₂ CaMg ₃ (Al ₂ Si ₂ O ₁₀)(OH) ₂	eastonite, siderophyllite stilpnomelane xanthophyllite
Talc	talc	Tlc	Al ⁺ Mg ₃ (Si ₄ O ₁₀)(OH) ₂	
Pyrophyllite	pyrophyllite	Prl	Al ⁺ Al ₂ (Si ₄ O ₁₀)(OH) ₂	
Serpentine	antigorite	Atg	Al ⁺ Mg ₃ (Si ₂ O ₅)(OH) ₄	lizardite, chrysotile
Kaolinite	kaolinite	Kln	Al ⁺ Al ₂ (Si ₂ O ₅)(OH) ₄	
Other clay minerals	illite montmorillonite vermiculite		2:1 dioctahedral 2:1 dioctahedral 2:1 trioctahedral	smectite
Chlorite		Chl	(Mg,Al,Fe) ₆ (Si,Al) ₄ O ₁₀ (OH) ₈	clinochlore

Chain Silicates	End Member	Abbr.	Formula	Related Minerals
Orthopyroxene (Opx)	enstatite	En	Mg ₂ Si ₂ O ₆	hypersthene, bronzite
	ferrosilite	Fs	Fe ₂ Si ₂ O ₆	
Clinopyroxene (Cpx) Augite (Aug)	diopside	Di	CaMgSi ₂ O ₆	omphacite aegirine-augite
	hedenbergite	Hd	CaFeSi ₂ O ₆	
	jadeite	Jd	NaAlSi ₂ O ₆	
	acmite	Ac	NaFe ⁺³ Si ₂ O ₆	
Pigeonite (Cpx)		Pig	(Mg,Fe) ₂ Si ₂ O ₆	
Pyroxenoids	wollastonite	Wo	Ca ₂ Si ₂ O ₆	rhodonite
Orthoamphibole (Oam)	anthophyllite	Ath	⚡Mg ₇ (Si ₈ O ₂₂)(OH) ₂	hypersthene, bronzite
	gedrite	Ged	Na(Mg,Fe) ₆ Al(AlSi ₇ O ₂₂)(OH) ₂	
Clinoamphibole	cummingtonite	Cum	Mg ₇ (Si ₈ O ₂₂)(OH) ₂	
	grunerite	Gru	Fe ₇ (Si ₈ O ₂₂)(OH) ₂	
Calcic-amphibole Hornblende (Hbl)	tremolite	Tr	⚡Ca ₂ Mg ₅ (Si ₈ O ₂₂)(OH) ₂	
	ferroactinolite	Act	⚡Ca ₂ Fe ₅ (Si ₈ O ₂₂)(OH) ₂	
	edenite	Ed	NaCa ₂ Mg ₅ (AlSi ₇ O ₂₂)(OH) ₂	
	tschermakite	Ts	⚡Ca ₂ Mg ₃ Al ₂ (Al ₂ Si ₆ O ₂₂)(OH) ₂	
Blue Amphiboles	glaucophanite	Gln	⚡Na ₂ Mg ₃ Al ₂ (Si ₈ O ₂₂)(OH) ₂	
	riebeckite	Rbk	⚡Na ₂ Fe ₃ Fe ⁺³ ₂ (Si ₈ O ₂₂)(OH) ₂	

Ring Silicates				
Cordierite		Crd	(Mg,Fe) ₂ Al ₄ Si ₅ O ₁₈ ·nH ₂ O	
Tourmaline			Na(Mg,Fe,Mn,Li) ₃ Al ₆ Si ₆ O ₁₈ (BO ₃) ₃ (OH) ₄	dravite, schorl, elbaite
Beryl	beryl	Brl	BeAl ₂ Si ₆ O ₁₈	

Island Silicates				
Olivine	forsterite	Fo	Mg ₂ (SiO ₄)	
	fayalite	Fa	Fe ₂ (SiO ₄)	
	tephroite	Tf	Mn ₂ (SiO ₄)	
Zircon	zircon	Zrn	Zr(SiO ₄)	
Titanite	titanite	Ti	CaTi(SiO ₄)(O,OH,F)	sphene

Garnet	pyrope	Prp	$Mg_3Al_2(Si_3O_{12})$	PyrAlSpite series
	almandine	Alm	$Fe_3Al_2(Si_3O_{12})$	
	spessartine	Sps	$Mn_3Al_2(Si_3O_{12})$	
	uvarovite	Uvr	$Ca_3Cr_2(Si_3O_{12})$	UGrAndite Series
	grossularite	Grs	$Ca_3Al_2(Si_3O_{12})$	
	andradidte	Adr	$Ca_3Fe^{+3}_2(Si_3O_{12})$	
Sillimanite	sillimanite	Sil	$Al_2(SiO_4)O$	mullite
Kyanite	kyanite	Ky	$Al_2(SiO_4)O$	
Andalusite	andalusite	And	$Al_2(SiO_4)O$	
Staurolite		Sta	$(Fe,Mg)_2(Al,Fe^{+3})_9(Si_4O_{16})O_6(O,OH)_2$	
Chloritoid		Ctd	$(Fe,Mg)Al_7(SiO_4)O(OH)_7$	
Lawsonite	lawsonite	Lws	$CaAl_2(OH)_2(Si_2O_7)H_2O$	pumpellyite
Zoisite	zoisite	Zo	$Ca_2Al_3O(OH)(Si_2O_7)(SiO_4)$	
Epidote	clinozoisite	Czo	$Ca_2AlAl_2O(OH)(Si_2O_7)(SiO_4)$	
	epidote	Epi	$Ca_2Fe^{+3}Al_2O(OH)(Si_2O_7)(SiO_4)$	

Oxides	End Member	Abbr.	Formula	Related Minerals
Periclase	periclase	Per	MgO	
Corundum	corundum	Crn	Al_2O_3	ruby, sapphire
Hematite	hematite	Hem	Fe_2O_3	
Ilmenite	ilmenite	Ilm	$FeTiO_3$	
Rutile	rutile	Rt	TiO_2	
Magnetite	magnetite	Mt	$FeFe^{+3}_2O_4$	
	ulvöspinel	Usp	$Fe(FeTi)O_4$	
Spinel	spinel	Spl	$MgAl_2O_4$	chromite
	hercynite	Hc	$FeAl_2O_4$	

Hydroxides				
Brucite	brucite	Brc	$Mg_3(OH)_6$	
Gibbsite	gibbsite	Gbs	$Al_2(OH)_6$	
Goethite	goethite	Got	$Fe^{+3}O(OH)$	lepidocrocite, limonite

Sulfides	End Member	Abbr.	Formula	Related Minerals
Pyrite	pyrite	Py	FeS ₂	
Pyrrhotite	pyrrhotite	Po	Fe _{1-x} S	
Chalcopyrite	chalcopyrite	Ccp	CuFeS ₂	
Sphalerite	sphalerite	Sp	ZnS	
Galena	galena	Gn	PbS	

Sulfates				
Barite	barite	Brt	BaSO ₄	
	celestite	Cls	SrSO ₄	
Gypsum	gypsum	Gyp	CaSO ₄ ·2H ₂ O	
Anhydrite	anhydrite	Anh	CaSO ₄	

Carbonates				
Calcite	calcite	Cc	CaCO ₃	rhodochrosite
	magnesite	Mgs	MgCO ₃	
	siderite	Sid	FeCO ₃	
Aragonite	aragonite	Arg	CaCO ₃	strontianite, witherite
Dolomite	dolomite	Dol	CaMg(CO ₃) ₂	
	ankerite	Ank	CaFe(CO ₃) ₂	

Phosphates				
Apatite	apatite	Ap	Ca ₅ (PO ₄) ₃ (OH,F,Cl)	
Monazite	monazite	Mnz	(Ca,La,Th)(PO ₄)	

Halides				
Fluorite	fluorite	Fl	CaF ₂	
Halite	halite	HI	NaCl	
	sylvite	Syl	KCl	