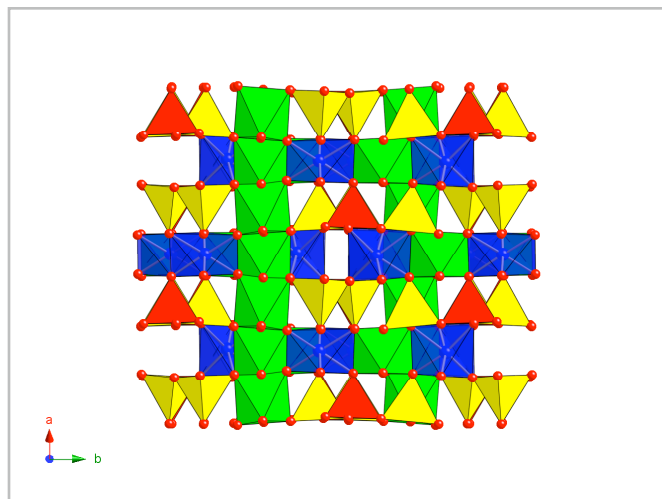


# sapphirine

69.2.1b.1



mineral group	
mineral subgroup	
date named	1819
name derivation	Named by Giesecke, from sapphire, because of its color.



Harvard ID # 97689  
 Locality: Messina, Northern Transvaal, Transvaal, South Africa  
 Horizontal Dimension: 9.3 cm

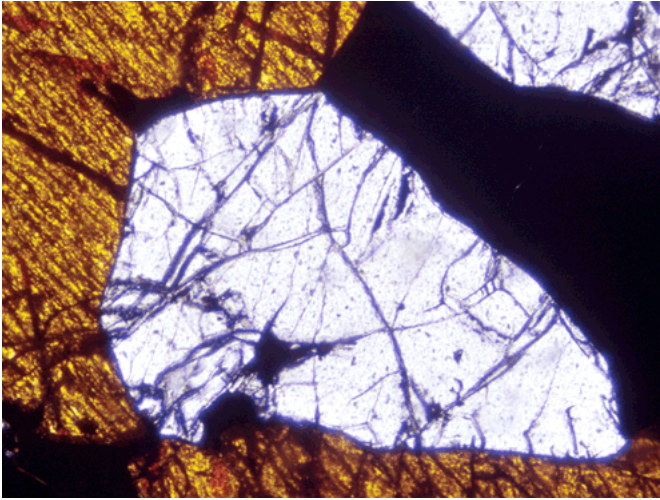
<b>Dana class</b>	inosilicate	
<b>diagnostic properties</b>	blue, prismatic or tabular, usually embedded in matrix	
<b>color</b>	blue, green, white, gray, red, yellow	
<b>luster</b>	vitreous	
<b>streak</b>	white to pale blue	
<b>Mohs hardness</b>	7.5	<b>specific gravity</b> 3.4-3.6
<b>cleavage</b>	fair on {010}, poor on {001}, {100}	
<b>fracture &amp; tenacity</b>	uneven, subconchoidal	
<b>habits</b>	commonly aggregates or disseminated grains; indistinct, tabular crystals rare	
<b>special properties</b>	transparent to translucent	
<b>reaction with acid</b>	insoluble in acids	

# sapphirine



69.2.1b.1

PPL



XPL



<b>crystal class</b>	prismatic
<b>birefringence</b>	0.005-0.009
<b>a Axis</b>	9.97-11.266
<b>b Axis</b>	10.34-14.401
<b>c Axis</b>	8.62-9.929
<b>alpha</b>	90 or 107.4
<b>beta</b>	125.6 or 95.2
<b>gamma</b>	90 or 123.8
<b>Z</b>	4

<b>crystal system</b>	monoclinic or triclinic
<b>reflectance</b>	
<b>space group</b>	$P2_1/a$ or $P\bar{1}$
<b>2V</b>	47-114
<b>optic type</b>	biaxial
<b>optic sign</b>	+/-
<b>alpha epsilon</b>	1.701-1.726
<b>beta omega</b>	1.703-1.728
<b>gamma</b>	1.705-1.734

## optical comment

## occurrence

Found in magnesium- and aluminum-rich high-temperature (and high pressure) metamorphic rocks such as granulites, and in peridotites and kimberlites. Occurs with sillimanite, kyanite, cordierite, kornerupine, corundum, phlogopite, chrysoberyl, pyroxene, spinel, garnet, calcite, and quartz.

## selected localities

Salt Hill, Cortland complex, Westchester Co., New York; Stockdale kimberlite pipe, Riley Co., Kansas; U.S.A. St. Urbain, Charlevoix Co., Quebec; Wilson Lake, Labrador, Newfoundland; Canada. Siggartartulik, Fiskenaesset, Greenland. Sakena, Vorokafotra, Bekily, Amjamiary, Betroka, Madagascar. Blinkwater, near Messina, Transvaal, South Africa. Mautia Hill, Tanzania. Waldheim, Saxony, Germany. Naxos, Greece. Harts Range, Northern Territory, Australia. Napier complex, Casey Bay, Enderby Land, Antarctica.