

Crystal Data: Orthorhombic. *Point Group:* *mm*2. As prisms or bundles of prisms, to 0.4 mm; typically as fine intergrowths with or overgrowths on sillimanite, or embaying werdingite.

Physical Properties: *Cleavage:* None. *Fracture:* n.d. *Tenacity:* Brittle.
Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.081

Optical Properties: Transparent. *Color:* Colorless. *Streak:* n.d. *Luster:* n.d.
Optical Class: Biaxial (+). $\alpha = 1.627(1)$ $\beta = 1.634(1)$ $\gamma = 1.649(1)$ $2V(\text{meas.}) = 57(2)^\circ$
 $2V(\text{calc.}) = 69(12)^\circ$

Cell Data: *Space Group:* *Cmc*2₁. $a = 5.7168(19)$ $b = 15.023(5)$ $c = 7.675(3)$ $Z = 2$

X-ray Powder Pattern: Mount Stafford, central Australia.
3.38 (100), 2.19 (80), 1.512 (80), 2.67 (60), 2.51 (60), 5.37 (50), 2.11(50)

Chemistry:	(1)
SiO ₂	19.01
TiO ₂	0.01
B ₂ O ₃	6.52
Al ₂ O ₃	74.10
MgO	0.07
CaO	0.00
MnO	0.01
FeO	0.40
Total	100.12

(1) Mount Stafford, central Australia; average of 11 electron microprobe analyses, corresponding to Mg_{0.01}Fe_{0.03}Al_{8.88}B_{1.14}Si_{1.93}O_{18.94}.

Occurrence: Product of granulite facies metamorphism of boron-rich peletic rocks.

Association: Sillimanite, werdingite, sekaninaite-cordierite, potassium feldspar, biotite, hercynite, ilmenite, ominelite-grandierite, plagioclase, alusite, tourmaline, monazite-(Ce), an unspecified apatite-group mineral, zircon.

Distribution: Mount Stafford, ~170 km northwest of Alice Springs, central Australia.

Name: Recognizes boron as an essential constituent and for its relationship to mullite.

Type Material: South Australian Museum, Science Centre, Morgan Thomas Lane, Adelaide, South Australia 5000, Australia; SAM G31520 and SAM G31521.

References: (1) Buick, I.S., E.S. Grew, T. Armbruster, O. Medenbach, M.G. Yates, G.E. Bebout, and G.L. Clarke (2008) Boromullite, Al₉BSi₂O₁₉, a new mineral from granulite-facies metapelites, Mount Stafford, central Australia: a natural analogue of a synthetic "boron-mullite". *Eur. J. Mineral.*, 20, 935–950. (2) (2009) *Amer. Mineral.*, 94, 648 (abs. ref. 1).