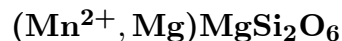


Donpeacorite



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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Interlocking grains up to 3 mm.

Physical Properties: *Cleavage:* Perfect on {110}. *Hardness* = 5–6 $D(\text{meas.}) = 3.36(1)$
 $D(\text{calc.}) = 3.403(2)$

Optical Properties: Semitransparent. *Color:* Pale buff, yellow-orange; faint pink in thin section. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Orientation:* $Z = c$. $\alpha = 1.677(2)$ $\beta = 1.684(2)$ $\gamma = 1.692(2)$
 $2V(\text{meas.}) = 88(5)^\circ$

Cell Data: *Space Group:* $Pbca$. $a = 18.384(11)$ $b = 8.879(7)$ $c = 5.226(3)$ $Z = 8$

X-ray Powder Pattern: Balmat, New York, USA.

3.18 (100), 2.896 (60), 1.495 (11), 1.479 (11), 4.03 (10), 3.09 (10), 2.961 (10)

Chemistry:

	(1)
SiO ₂	55.12
Al ₂ O ₃	0.23
FeO	0.14
MnO	18.48
MgO	26.31
CaO	0.69
Na ₂ O	0.03
Total	[101.00]

(1) Balmat, New York, USA; by electron microprobe, original total given as 100.00%; corresponding to $(\text{Mg}_{1.41}\text{Mn}_{0.56}\text{Ca}_{0.03})_{\Sigma=2.00}(\text{Si}_{1.98}\text{Al}_{0.01})_{\Sigma=1.99}\text{O}_{5.99}$.

Polymorphism & Series: Dimorphous with kanoite.

Mineral Group: Pyroxene group.

Occurrence: In manganese-rich siliceous marbles metamorphosed to the upper amphibolite facies.

Association: Tirodite, tourmaline, ferrian braunite, manganoan dolomite, hedyphane, anhydrite.

Distribution: In the Balmat No. 4 mine, Balmat, St. Lawrence Co., New York, USA.

Name: To honor Dr. Donald R. Peacor (1937–), University of Michigan, Ann Arbor, Michigan, USA.

Type Material: Harvard University, Cambridge, Massachusetts, 124237; National Museum of Natural History, Washington, D.C., USA, 159862.

References: (1) Petersen, E.U., L.M. Anovitz, and E.J. Essene (1984) Donpeacorite, $(\text{Mn}, \text{Mg})\text{MgSi}_2\text{O}_6$, a new orthopyroxene and its proposed phase relations in the system $\text{MnSiO}_3 - \text{MgSiO}_3 - \text{FeSiO}_3$. *Amer. Mineral.*, 69, 472–480.