

Hydroxymanganopyrochlore**Crystal Data:** Cubic. *Point Group:* 4/m $\bar{3}$ 2/m. Crystals octahedral, to 0.7 mm.**Physical Properties:** *Cleavage:* None. *Fracture:* n.d. *Tenacity:* Brittle. *Hardness* = n.d.
D(meas.) = n.d. D(calc.) = 5.398**Optical Properties:** Translucent. *Color:* Dark brown, black, with red reflexes. *Streak:* n.d.
Luster: n.d.*Optical Class:* n.d. *n*(calc.) = 2.29**Cell Data:** *Space Group:* *Fd*3m. *a* = 10.2523(2) *Z* = 8**X-ray Powder Pattern:** Mendig, Laacher See area, Eifel volcanic region, Germany.
2.969 (100), 1.816 (47), 2.569 (40), 1.548 (40), 1.481 (14), 1.178 (14), 2.358 (12)

Chemistry:	(1)
Na ₂ O	2.48
CaO	3.65
MnO	8.22
Fe ₂ O ₃	3.39
La ₂ O ₃	3.22
Ce ₂ O ₃	6.76
Nd ₂ O ₃	0.92
TiO ₂	15.43
ThO ₂	22.58
UO ₂	2.42
Nb ₂ O ₅	29.42
F	0.49
H ₂ O	[1.34]
<u>-O=F₂</u>	<u>0.21</u>
Total	100.11

(1) Mendig, Laacher See area, Eifel volcanic region, Germany; average of 7 electron microprobe analyses, H₂O calculated for charge balance; corresponding to
 (Mn_{0.51}Th_{0.37}Na_{0.35}Ca_{0.29}Ce_{0.18}La_{0.09}Nd_{0.02}U_{0.04}) Σ =1.85(Nb_{0.97}Ti_{0.85}) Σ =2.01O₆[(OH)_{0.65}O_{0.24}F_{0.11}].

Mineral Group: Pyrochlore group.**Occurrence:** In small miarolitic cavities in sanidine as a late pneumatolytic phase.**Association:** Sanidine, nosean, biotite, tephroite, jacobsite, and spinellides of the gahnite–hercynite series.**Distribution:** From a pumice quarry, near Mendig, Laacher See area, Eifel volcanic region, Rheinland-Pfalz, Germany.**Name:** Reflects the mineral's identity as a member of the *pyrochlore* group with dominant OH (*hydroxyl*) and Mn²⁺ respectively in the Y and A structural sites.**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Chukanov, N.V., G. Blass, N.V. Zubkova, I.V. Pekov, D.Y. Pushcharovskii, and H. Prinz (2013) Hydroxymanganopyrochlore: A New Mineral from the Eifel Volcanic Region, Germany. *Doklady Akademii Nauk*, 449(2), 215-218. English translation: *Doklady Earth Sciences*, 2013, 449(1), 342-345. (2) (2014) *Amer. Mineral.*, 99, 245-246 (abs. ref. 1).