

Crystal Data: Tetragonal. *Point Group:* 4/m 2/m 2/m. As aggregates of minute tabular to prismatic crystals with pyramidal terminations.

Physical Properties: *Cleavage:* Perfect on {100}. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = ~3 VHN = 140 (100 g load). D(meas.) = n.d. D(calc.) = 7.72

Optical Properties: Translucent. *Color:* Pale orange-brown, gray in reflected light with abundant pale-yellow internal reflections. *Streak:* White. *Luster:* Vitreous.

Optical Class: n.d. $n = 2.15$ [calculated]

R: (470) 14.6, (546) 13.6, (589) 13.4, (650) 13.2

Cell Data: *Space Group:* I4/mmm. $a = 4.065(1)$ $c = 12.631(7)$ $Z = 2$

X-ray Powder Pattern: Torr Works (Merehead) quarry, England.

2.923 (100), 2.875 (68), 3.848 (41), 6.306 (17), 1.680 (14), 2.110 (12), 2.049 (10)

Chemistry:	(1)	(2)
PbO	90.63	92.07
F	3.53	3.92
Cl	7.15	7.31
<u>-O=(F+Cl)₂</u>	<u>3.23</u>	<u>3.30</u>
Total	99.08	100.00

(1) Torr Works (Merehead) quarry, England; average of 25 electron microprobe analyses, O calculated by difference, absence of OH⁻ determined by structure analysis; corresponding to Pb_{2.039}O_{1.00}F_{0.992}Cl_{1.001}. (2) [Pb₂OF]Cl.

Occurrence: Part of an assemblage of lead oxychloride minerals that occur in cavities in manganese oxide pods in limestone.

Association: Calcite, cerussite, diabloite, hydrocerussite, pyrolusite, manganite.

Distribution: From the Torr Works (Merehead) quarry, near the village of Cranmore, Somerset, England.

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Type Material: Natural History Museum, London, England (BM 1970,110).

References: (1) Turner, M.S., O.I. Siidra, S.V. Krivovichev, C.J. Stanley, and J. Spratt (2012) Rumseyite, [Pb₂OF]Cl, the first naturally occurring fluoroxychloride mineral with the parent crystal structure for layered lead oxychlorides. *Mineral. Mag.*, 76(5), 1247-1255. (2) (2015) Amer. Mineral., 100, 662 (abs. ref. 1).