

Crystal Data: Hexagonal. *Point Group:* 6/m 2/m 2/m. As plates and irregular grains to 5 mm.

Physical Properties: *Cleavage:* Perfect on {0001}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = ~3 VHN = 111-167, 140.4 average (20 g load). D(meas.) = n.d. D(calc.) = 7.01

Optical Properties: Transparent. *Color:* Green or white; gray in reflected light. *Streak:* White. *Luster:* Adamantine.

Optical Class: Biaxial (-). $n(\text{calc.}) = 2.00$ White and blue internal reflections with yellowish tints in plane-polarized transmitted light. *Birefractance:* Very weak.

R: (470) 46.3, (546) 47.6, (589) 48.5, (650) 49.5

Cell Data: Space Group: $P6_3/mmc$. $a = 5.2427(7)$ $c = 40.624(6)$ $Z = 2$

X-ray Powder Pattern: Torr Works quarry, near Cranmore, Mendip Hills, Somerset, England. 3.390 (100), 2.544 (98), 2.625 (78), 3.206 (55), 3.581 (40), 4.308 (33), 2.119 (27)

Chemistry:	(1)	(2)	(3)
PbO	86.77	88.12	87.46
CO ₂	[10.70]	[10.85]	10.78
H ₂ O	[1.75]	[1.78]	1.76
Total	99.22	100.75	100.00

(1) Torr Works quarry, near Cranmore, Mendip Hills, Somerset, England; average electron microprobe analysis supplemented by FTIR spectroscopy, H₂O calculated for charge balance, CO₂ calculated from stoichiometry; corresponds to Pb_{8.00}C_{5.00}H_{4.00}O₂₀. (2) Do., corresponds to Pb_{8.00}C_{5.00}H_{4.00}O₂₀. (3) Pb₈O(OH)₄(CO₃)₅.

Occurrence: In hydrothermal veins of remobilized components derived from older veins containing galena, fluorite, calcite and baryte, hosted by limestone.

Association: Plumbonacrite, cerussite, symesite, mereheadite, diaboileite, mimetite, calcite, aragonite, quartz, baryte.

Distribution: At Torr Works quarry ('Merehead quarry'), near Cranmore, Mendip Hills, Somerset, England.

Name: For the county of *Somerset* in South West England where the first specimens were collected.

Type Material: Department of Mineralogy, St. Petersburg State University, St. Petersburg, Russia (1/19661).

References: (1) Siidra, O.I., D.O. Nekrasova, R. Turner, A.N. Zaitsev, N.V. Chukanov, Y.S. Polekhovskiy, J. Spratt, and M.S. Rumsey (2018) Somersetite, Pb₈O(OH)₄(CO₃)₅, a new complex hydrocerussite-related mineral from the Mendip Hills, England. *Mineral. Mag.*, 82(5), 1211-1224. (2) (2019) *Amer. Mineral.*, 104(5), 783-784 (abs. ref 1).