

Crystal Data: Monoclinic. *Point Group:* 2/m. As fibers to 200 μm .

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* n.d.
Hardness = 3 (by comparison to litochlebite). D(meas.) = n.d. D(calc.) = 8.00

Optical Properties: Opaque. *Color:* Gray. *Streak:* Black. *Luster:* Metallic.
Optical Class: n.d.

Cell Data: *Space Group:* $P2_1/m$. $a = 13.002(1)$ $b = 4.1543(3)$ $c = 15.312(2)$ $\beta = 108.92(1)^\circ$ $Z = 2$

X-Ray Diffraction Pattern: Bivels, Grand Duchy of Luxembourg.
2.984 (100), 2.085 (60), 1.355 (30), 1.188 (30), 4.61 (20), 3.59 (20), 2.425 (20)

Chemistry:	(1)	(2)
S	0.01	
Fe	0.02	
Pb	11.95	11.22
Ag	6.60	5.58
Cu	2.66	3.44
Bi	43.73	45.28
Se	31.04	34.22
Total	96.01	100.00

(1) Bivels, Grand Duchy of Luxembourg; average electron microprobe analysis; corresponds to $\text{Ag}_{1.00}(\text{Cu}_{0.82}\text{Ag}_{0.20}\text{Fe}_{0.01})_{\Sigma=1.03}\text{Pb}_{1.13}\text{Bi}_{4.11}(\text{Se}_{7.72}\text{S}_{0.01})_{\Sigma=7.73}$. (2) $\text{AgCuPbBi}_4\text{Se}_8$.

Polymorphism & Series: Very limited solid solution with litochlebite.

Occurrence: In hydrothermal veins of finely crystallized dolomite and siderite cutting red schists.

Association: Dolomite, siderite.

Distribution: On dumps from the construction of a tunnel by the “Société Electrique de l'Our”, at Bivels, north of the Grand Duchy of Luxembourg.

Name: For the city of *Luxembourg*, close to where the studied material was collected.

Type Material: Natural History Museum of Luxembourg, Luxembourg, Luxembourg (FD040) and the Laboratory of Mineralogy, University of Liège, Liège, Belgium (21302).

References: (1) Philippo, S., F. Hatert, Y. Bruni, P. Vignola, and J. Sejkora (2020) Luxembourgite, $\text{AgCuPbBi}_4\text{Se}_8$, a new mineral species from Bivels, Grand Duchy of Luxembourg. *Eur. J. Mineral.*, 32, 449-455.