

Crystal Data: Orthorhombic. *Point Group:* *mm*2. Crystals are prismatic, to 2 mm; in banded exsolution intergrowths epitaxial with gladite.

Physical Properties: *Cleavage:* {010}, good. Hardness = n.d. VHN = n.d. D(meas.) = n.d. D(calc.) = 6.8

Optical Properties: Opaque. *Color:* Lead-gray; white to cream in reflected light. *Streak:* Lead-gray. *Luster:* Metallic. R₁–R₂: n.d.

Cell Data: *Space Group:* *P*2₁*am*. *a* = 11.472(2) *b* = 33.744(6) *c* = 4.016(1) *Z* = 2

X-ray Powder Pattern: Juno mine, Australia. 3.140 (100), 3.025 (40), 3.622 (30), 1.971 (30), 3.564 (25), 3.593 (20), 2.554 (20)

Chemistry:	(1)
Pb	5.1
Cu	1.3
Bi	73.6
Se	7.4
S	14.3
Total	101.7

(1) Juno mine, Australia; by electron microprobe, corresponds to Pb_{0.82}Cu_{0.68}Bi_{11.74}(S_{14.87}Se_{3.13})_{Σ=18.00}

Occurrence: In magnetite pipes that cut felsic sediments and pyroclastics; the pipes are probably hydrothermal replacements associated with volcanism (Juno mine, Australia).

Association: Gladite, junosite, emplectite, magnetite, chalcopyrite (Juno mine, Australia); padéraite, hammarite, chalcopyrite, grossular, andradite (Băița, Romania).

Distribution: From the Juno mine, Tennant Creek, Northern Territory, Australia [TL]. Found near Narechen Basni, southern Rhodope Mountains, and at the Svishti Plaz gold deposit, Balkan Mountains, Bulgaria. In the Kochbulak gold deposit, Chatkal-Kuramin Mountains, eastern Uzbekistan. At the Funiushan copper skarn deposit, near Nanjing, Jiangsu Province, China. From Băița (Rézbánya), Tincova, and Sasca Montană, Romania. At the Waschgang Au–Cu deposit, Goldberg Mountains, Upper Carinthia, Austria. In the Loch Shin monzogranite, near Lairg, Scotland. At the Tanco pegmatite, Bernic Lake, Manitoba, Canada. In the USA, from the Germania Consolidated mine, Fruitland, Stevens Co., Washington; and the Comstock mine, Dos Cabezas Mountains, Cochise Co., Arizona.

Name: For the Peko mine, near the Juno mine, Tennant Creek, Australia.

Type Material: Geology Department, University of New England, Australia, R27788.

References: (1) Mumme, W.G., E. Welin, and B.J. Wuensch (1976) Crystal chemistry and proposed nomenclature for sulfosalts intermediate in the system bismuthinite–aikinite (Bi₂S₃–CuPbBiS₃). *Amer. Mineral.*, 61, 15–20. (2) Mumme, W.G. and J.A. Watts (1976) Pekoite, CuPbBi₁₁S₁₈, a new member of the bismuthinite–aikinite mineral series: its crystal structure and relationship with naturally- and synthetically-formed members. *Can. Mineral.*, 14, 322–333. (3) Large, R.R. and W.G. Mumme (1975) Junosite, “wittite”, and related seleniferous bismuth sulfosalts from Juno mine, Northern Territory, Australia. *Econ. Geol.*, 70, 369–383. (4) Mumme, W.G. and J.A. Watts (1976) Additional physical, optical and x-ray data for pekoite. *Can. Mineral.*, 14, 578. (5) Topa, D., E. Makovicky, and W.H. Paar (2002) Composition ranges and exsolution pairs for the members of the bismuthinite–aikinite series from Felbertal, Austria. *Can. Mineral.*, 40, 849–869.

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