

Crystal Data: Monoclinic. *Point Group:* 2/*m*. Crystals stout prismatic, flattened on {001} and lathlike by extension along [010], to several mm. As groups of divergent crystals, rosettes, and radial fibrous aggregates; in dense gumlike crusts and compact, colloform masses.

Physical Properties: *Cleavage:* Perfect on {001}, indistinct on {100} and {010}. *Tenacity:* Brittle. Hardness = 4–5 D(meas.) = 5.83–6.5 D(calc.) = 6.256 Radioactive.

Optical Properties: Transparent to translucent, opaque. *Color:* Ocher-yellow to brownish yellow; amber-brown when transparent; rarely lemon-yellow to green or reddish orange. *Streak:* Pale yellow-brown. *Luster:* Subadamantine to greasy, dull to earthy when massive. *Optical Class:* Biaxial (+). *Pleochroism:* Weak, rarely; X = Y = very pale yellow; Z = colorless to slightly grayish. *Orientation:* X = b; Z ≈ c. α = 1.877–1.900 β = 1.880–1.910 γ = 1.935–1.970 2V(meas.) = 43°

Cell Data: *Space Group:* P2₁/a. a = 13.24 b = 6.94 c = 6.70 β = 104°20' Z = 4

X-ray Powder Pattern: Kasolo, Congo.

3.26 (10), 2.93 (9), 4.19 (8b), 3.53 (7), 6.61 (6), 3.07 (5), 1.962 (5)

Chemistry:

	(1)	(2)
SiO ₂	9.42	10.23
UO ₃	49.28	48.70
Fe ₂ O ₃	0.41	
PbO	36.2	38.00
MgO	0.03	
CaO	0.06	
H ₂ O	3.59	3.07
CO ₂	0.85	
Total	99.84	100.00

(1) Kasolo, Congo. (2) Pb(UO₂)SiO₄•H₂O.

Occurrence: An oxidization product of uraninite.

Association: Uraninite, torbernite, curite, dewindtite (Kasolo, Congo); rutherfordine, sklodowskite, curite (Nabarlek, Australia).

Distribution: From Shinkolobwe, and the Musonoi mine, Kolwezi, Katanga Province, Congo (Shaba Province, Zaire). At Mounana, Gabon. In Germany, at Wölsendorf, Bavaria. In France, at Kersegalec, Lignol, Morbihan; Grury, Saône-et-Loire; and at Reliez and Bigay, Lachaux, Puy-de-Dôme. At Loe Warren, St. Just, Cornwall, England. In the Nabarlek and Koongarra uranium deposits, Northern Territory, and at Wodgina, Pilbara district, Western Australia. In the USA, in the Ruggles pegmatite, near Grafton, Grafton Co., New Hampshire; from the Green Monster mine, Goodsprings district, Clark Co., and the 4-D mine, Marietta district, Mineral Co., Nevada; and in the Ross-Adams mine, Bokan Mountain, Prince of Wales Island, Alaska. In Canada, at Great Bear Lake, Northwest Territories, and at Lake Athabasca, Saskatchewan, from the Nicholson mines. In the Santo Domingo mine, Santa Eulalia, Chihuahua, Mexico. A number of other minor localities are known.

Name: For the occurrence at Shinkolobwe, near Kasolo Hill, Congo (Zaire).

Type Material: Natural History Museum, Paris, France, 121.287.

References: (1) Schoep, A. (1921) Sur la kasolite, nouveau minéral radioactif. *Compt. Rendus Acad. Sci. Paris*, 173, 1476–1477 (in French). (2) (1922) *Amer. Mineral.*, 7, 128–129 (abs. ref. 1). (3) Frondel, C. (1958) Systematic mineralogy of uranium and thorium. *U.S. Geol. Sur. Bull.* 1064, 315–319. (4) Stohl, F.V. and D.K. Smith (1981) The crystal chemistry of the uranyl silicate minerals. *Amer. Mineral.*, 66, 610–625.

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