

**Crystal Data:** Hexagonal. *Point Group:* 32. As hexagonal or irregularly shaped crystals, platy on (001), to 1 mm. Crystals often split and combined in open aggregates or thin crusts.

**Physical Properties:** *Cleavage:* Perfect on {001}. *Tenacity:* Brittle. *Fracture:* n.d.  
Hardness = 2.5      D(meas.) = n.d.      D(calc.) = 2.797

**Optical Properties:** Transparent. *Color:* Colorless, white to grayish-white in aggregates.

*Streak:* White. *Luster:* Vitreous.

**Optical Class:** Uniaxial (-).  $\omega = 1.546(2)$      $\varepsilon = 1.533(3)$     *Pleochroism:* None.

**Cell Data:** Space Group: *P*321.  $a = 4.7281(3)$      $c = 7.9936(5)$      $Z = 1$

**X-ray Powder Pattern:** Tolbachik volcano, Kamchatka, Russia.

3.649 (100), 2.861 (51), 8.02 (34), 2.364 (25), 2.660 (19), 2.267 (14), 1.822 (12), 4.085 (11)

<b>Chemistry:</b>	(1)
Na <sub>2</sub> O	0.09
K <sub>2</sub> O	18.12
CaO	0.08
MnO	0.03
Fe <sub>2</sub> O <sub>3</sub>	2.02
Al <sub>2</sub> O <sub>3</sub>	18.18
SO <sub>3</sub>	61.80
Total	100.37

(1) Tolbachik volcano, Kamchatka, Russia; average of 5 electron microprobe analyses, corresponds to (K<sub>0.997</sub>Na<sub>0.008</sub>Ca<sub>0.004</sub>) $\Sigma=1.009$ (Al<sub>0.925</sub>Fe<sup>3+</sup><sub>0.066</sub>Mg<sub>0.003</sub>Mn<sub>0.001</sub>) $\Sigma=0.995$ S<sub>2.001</sub>O<sub>8</sub>.

**Occurrence:** A volcanic sublimate formed at 150-170 °C as part of sulfate crusts around an active fumarole. Also described as a sublimate near burning coal deposits.

**Association:** Alumoklyuchevskite, langbeinite, euchlorine, fedotovite, chalcocyanite, hematite, kamchatkite, atlasovite, melanothallite, tenorite, avdoninite, belloite, ziesite, Cu-lyonsite (Tolbachik, Russia).

**Distribution:** From the Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption (1975–1976), Tolbachik volcano, Kamchatka, and the dumps of coal mine N 47 near Kopeisk, South Urals, Russia. At Showashinzan volcano, Hokkaido, Japan. From Izalco volcano, El Salvador and Santiaguit volcano, Guatemala. From burning anthracite coal deposits Eastern Pennsylvania, USA.

**Name:** From the Russian word *стекло* (*steklo*) for *glass* as an allusion to the visual appearance of aggregates of the mineral formed around vents of a burning coal heap (coal mine N 47 near Kopeisk, South Urals, Russia).

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia; 4109/1.

**References:** (1) Murashko, M.N., I.V. Pekov, S.V. Krivovichev, A.P. Chern-yatyeva, V.O. Yapaskurt, A.E. Zadov, and M.E. Zelensky (2012) Steklite, KAl(SO<sub>4</sub>)<sub>2</sub>: the find at Tolbachik volcano (Kamchatka, Russia), validation as a mineral species and crystal structure. *Zap. Ross. Mineral. Obsch.*, 141(4), 36-44 (in Russian, English abstract). (2) (2013) *Amer. Mineral.*, 98, 2203-2204 (abs. ref. 1 and additional references).