

**Donbassite****Al<sub>4.33</sub>(Si<sub>3</sub>Al)O<sub>10</sub>(OH)<sub>8</sub>**

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**Crystal Data:** Monoclinic. *Point Group:* 2. As flaky aggregates.**Physical Properties:** *Cleavage:* One perfect. *Tenacity:* Flexible. *Hardness* = 2.5  
D(meas.) = 2.63 D(calc.) = [2.66]**Optical Properties:** Semitransparent. *Color:* White. *Luster:* Pearly.  
*Optical Class:* Biaxial (+). *Orientation:* Z = c. *Dispersion:* r > v, marked.  $\alpha = 1.728$   
 $\beta = 1.729$   $\gamma = 1.735$   $2V(\text{meas.}) = 52^\circ$ **Cell Data:** *Space Group:* C2. a = 5.174 b = 8.956 c = 14.26  $\beta = 97.83^\circ$  Z = [2]**X-ray Powder Pattern:** n.d.

<b>Chemistry:</b>	(1)	(2)	(3)
SiO <sub>2</sub>	33.64	34.73	34.40
Al <sub>2</sub> O <sub>3</sub>	45.02	48.08	51.85
Fe <sub>2</sub> O <sub>3</sub>	1.38	1.04	
MgO	1.75	0.80	
CaO	2.03		
Li <sub>2</sub> O	trace	trace	
Na <sub>2</sub> O	1.30		
H <sub>2</sub> O	15.20	14.58	13.75
<b>Total</b>	<b>100.32</b>	<b>99.23</b>	<b>100.00</b>

(1) Utrennyaia shaft, Donets Basin, Ukraine. (2) Uralskaya vein, Donets Basin, Ukraine.

(3) Al<sub>4.33</sub>(Si<sub>3</sub>Al)O<sub>10</sub>(OH)<sub>8</sub>.**Polymorphism & Series:** 1a-2 polytype.**Mineral Group:** Chlorite group.**Occurrence:** In the lode walls and crushed zones in ore veins and as coatings on slickensides of coals. In soils and sediments in very aluminum-rich environments.**Association:** n.d.**Distribution:** From a number of places in the Donets Basin, as at Nagol'no Tarasovka, Ukraine. On Novaya Zemlya, Arctic Ocean. From Kesselberg, Black Forest, Germany. At Saint-Paul-de-Fenouillet, Pyrénées-Orientales, France. From Namivu, Alto Ligonha district, Mozambique. At Szabo Bluff, Scott Glacier, Antarctica.**Name:** For occurrences in the DONets BASin, Ukraine.**Type Material:** n.d.**References:** (1) Lazerenko, E.K. (1940) Donbassites, a new group of minerals from the Donets Basin. Doklady Acad. Nauk SSSR, 28, 509–521 (in Russian). (2) (1941) Amer. Mineral., 26, 349 (abs. ref. 1). (3) Aleksandrova, V.A., V.A. Drits, and G.V. Sokolova (1972) Structural features of dioctahedral one-packet chlorite. Kristallografiya (Sov. Phys. Crystal.), 17, 525–532 (in Russian). (4) Bailey, S.W. and J.S. Lister (1989) Structures, compositions, and X-ray diffraction identification of dioctahedral chlorites. Clays and Clay Minerals, 37, 193–202.