Zirklerite $(Fe^{2+}, Mg, Ca)_9Al_4Cl_{18}(OH)_{12} \cdot 14H_2O(?)$

Crystal Data: Hexagonal. *Point Group:* n.d. Fibrous to granular, massive.

Physical Properties: *Cleavage:* Rhombohedral. Hardness = ~3.5 D(meas.) = ~2.6 D(calc.) = n.d. Decomposed by water with separation of Al_2O_3 and $Fe(OH)_2$.

Optical Properties: Semitransparent. *Color:* Light gray.
Optical Class: Uniaxial (+). n = ~1.552, birefringence < 0.009.

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: n.d.

Chemistry:

	(1)
Al_2O_3	12.29
$FeCl_2$	57.20
$MgCl_2$	6.83
$CaCl_2$	2.47
H_2O	21.23
Total	[100.02]

(1) Hope, Germany; recalculated after deduction of anhydrite 5.08%, halite 15.64%, and insoluble 31.26%.

Occurrence: As the principal constituent of a rock composed of halite, anhydrite, quartz, and clay minerals, in brecciated layers intercalcated with halite and potash layers.

Association: Halite, anhydrite, rinneite, dolomite, chlorite, quartz, clay minerals.

Distribution: In the Adolfsglück mine, Hope, west of Hamelyn, Lower Saxony, Germany.

Name: For Dr.-Ing. Zirkler, General Director of the Aschersleben Potash Works, Germany.

Type Material: The Natural History Museum, London, England, 1929,40.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 87. (2) Harbort, E. (1928) Über Zirklerite. Ein neues durch Thermo-Dynamometamorphose gebildetes Mineral aus einigen Salzstöcken der norddeutschen Tiefebene. Kali und Verwandte Salze, 22, 157–161. (3) (1928) Amer. Mineral., 13, 592 (abs. ref. 2). (4) (1929) Mineral. Abs., 4, 14–15 (abs. ref. 2).