

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As short prismatic crystals, to 1 mm, displaying $\{0001\}$, $\{10\bar{1} 0\}$, $\{10\bar{1} 1\}$.

Physical Properties: *Cleavage:* Perfect $\{0001\}$. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 2 VHN = 57.8 (15/25 g load). D(meas.) = 3.27(1) D(calc.) = 3.24

Optical Properties: Transparent. *Color:* Greenish blue. *Streak:* Bright greenish-blue. *Luster:* Vitreous.

Optical Class: Uniaxial (-). $\omega = 1.753(5)$ $\epsilon = 1.710(5)$

Pleochroism: *O* = greenish blue; *E* = faint greenish-blue.

Cell Data: *Space Group:* $P\bar{3} m1$. $a = 6.2733(4)$ $c = 5.7472(5)$ $Z = 1$

X-ray Powder Pattern: Haydee mine, Atacama Desert, northern Chile. 5.745 (100), 2.872 (17), 1.915 (9), 2.455 (6), 1.972 (4), 2.750 (3), 2.540 (3)

Chemistry:	(1)	(2)
CuO	61.83	61.52
MgO	10.06	10.39
Cl	17.91	18.28
H ₂ O	14.97	13.94
-O = Cl	4.05	4.12
Total	100.72	100.00

(1) Haydee mine, Atacama Desert, northern Chile; average of 10 electron microprobe and combustion element analyzer analyses, corresponding to $\text{Cu}_{2.95}\text{Mg}_{0.95}\text{H}_{6.30}\text{Cl}_{1.92}\text{O}_{6.08}$.

(2) $\text{Cu}_3\text{Mg}(\text{OH})_6\text{Cl}_2$.

Distribution: Haydee mine, western border of the southern end of Salar Grande, 110 km SE of Iquique, Atacama Desert, Tarapacá Province, northern Chile.

Name: For the Haydee mine, where the first specimens were collected.

Type Material: Mineralogical Museum, University of Hamburg, Germany.

References: (1) Schlüter, J. and T. Malcherek (2007) Haydeeite, $\text{Cu}_3\text{Mg}(\text{OH})_6\text{Cl}_2$, a new mineral from the Haydee mine, Salar Grande, Atacama desert, Chile. *Neus Jb. Mineral. Abh.*, 184, 39–43. (3) (2008) *Amer. Mineral.*, 93, 1942–1943 (abs. ref. 1).