

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m.

Physical Properties: *Cleavage:* *Tenacity:* *Fracture:*

Hardness = D(meas.) = D(calc.) =

Optical Properties: *Color:* *Streak:* *Luster:*

Optical Class:

Cell Data: *Space Group:* Cmc₂m. *a* = 2.90(3) *b* = 10.25(20) *c* = 12.50(8)

X-Ray Diffraction Pattern: Shergotty Martian meteorite.

2.668 (100), 2.084 (65), 2.177 (37), 2.548 (34), 2.562 (29), 1.499 (28), 1.669 (26)

Chemistry:

Polymorphism & Series:

Mineral Group:

Occurrence: From shock metamorphism in Martian meteorites. At the rim of a transformed ilmenite-ülvöspinel grain.

Association: Liuite, tschaunerite.

Distribution: From the Shergotty and Tissint Martian meteorites.

Name:

Type Material: E. Stolper Martian Meteorite Collection, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California, USA (thin section Shergotty-1).

References: (1) Hålenius, U., F. Hatert, M. Pasero, and S.J. Mills (2018) IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) Newsletter 46. New minerals and nomenclature modifications approved in 2018. *Mineral. Mag.*, 82(6), 1378. (2) Morrison, S.M. and R.M. Hazen (2021) An evolutionary system of mineralogy, Part IV: Planetary differentiation and impact mineralization (4566 to 4560 Ma). *Amer. Mineral.*, 10(5), 730-761.