

Crystal Data: Hexagonal. *Point Group:* $\bar{6} m2$. As a 35 μm angular grain.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Splintery. Hardness = n.d. D(meas.) = n.d. D(calc.) = 10.74

Optical Properties: Opaque. *Color:* White in reflected light, grayish white compared to marathonite, bornite, and chalcopyrite. *Streak:* n.d. *Luster:* Metallic.

Optical Class: Anisotropic. No pleochroism, or birefractance.

R₁-R₂: (470) 46.8-53.4, (546), 49.5-55.4, (589) 50.1-55.7, (650) 51.2-56.5

Cell Data: *Space Group:* $P\bar{6} 2m$. $a = 6.712(1)$ $c = 3.408(1)$ $Z = 3$

X-Ray Diffraction Pattern: Calculated pattern for synthetic analog.

2.392 (100), 2.211 (58), 2.197 (43), 1.937 (34), 1.846 (16), 1.7037 (16), 1.2418 (18)

Chemistry:	(1)	(2)
Si	0.04	
Fe	0.14	
Pb	0.08	
Cu	0.06	
Ge	25.21	25.44
Te	0.30	
Pd	73.10	74.56
Pt	0.95	
Total	99.88	100.00

(1) Marathon Cu-PGE deposit, Coldwell complex, Ontario, Canada; average electron microprobe analysis supplemented by Raman spectroscopy; corresponding to $(\text{Pd}_{1.97}\text{Pt}_{0.18}\text{Fe}_{0.01})_{\Sigma=1.99}(\text{Ge}_{1.00}\text{Te}_{0.01})_{\Sigma=1.01}$. (2) Pd₂Ge.

Occurrence: In heavy mineral separates from olivine gabbro.

Association: Zvyagintsevite, bornite, Te-bearing marathonite, magnetite, chalcopyrite, kotulskitechlorite.

Distribution From the W horizon, Marathon Cu-PGE deposit, Coldwell complex, Ontario, Canada.

Name: For its composition and relationship to palladosilicide.

Type Material: Canadian Museum of Nature, Gatineau, Québec (87179).

References: (1) McDonald, A.M., D.E. Ames, I.M. Kjarsgaard, L.J. Cabri, W. Zhe, K.C. Ross, and D.J. Good (2021) Marathonite, Pd₂₅Ge₉, and palladogermanide, Pd₂Ge, two new platinum-group minerals from the Marathon deposit, Coldwell Complex, Ontario, Canada: Descriptions, crystal-chemical considerations, and genetic implications. *Can. Mineral.*, 59, 1865-1886.