

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As anhedral grains to ~20 μm.

Physical Properties: *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness =* n.d. *D(meas.) =* n.d. *D(calc.) =* 2.619

Optical Properties: Opaque. *Color:* Gray to black. *Streak:* Black. *Luster:* Metallic.
Optical Class: Anisotropic without rotation tints. *Bireflectance:* Weak to moderate. Non-pleochroic.
R₁-R₂: (471.1) 31.2-28.8, (548.3) 32.0-29.4, (586.6) 32.8-30.6, (652.3) 33.7-31.5

Cell Data: *Space Group:* Pnma. *a =* 29.013(3) *b =* 8.156(1) *c =* 12.401(2) *Z =* 4

X-ray Powder Pattern: Khatyrka CV3 carbonaceous chondrite meteorite.
2.045 (100), 2.024 (70), 3.96 (50), 2.069 (50), 2.033 (50), 3.80 (40), 3.403 (40)

Chemistry:	(1)
Al	58.75
Ni	33.85
Fe	7.09
Si	0.03
<u>Co</u>	<u>0.01</u>
Total	99.76

(1) Khatyrka CV3 carbonaceous chondrite meteorite; average electron microprobe analysis; corresponds to Al_{33.99}Ni_{9.00}Fe_{1.98}Si_{0.02}Co_{0.01}.

Occurrence: In shock metamorphosed portions of a CV3 carbonaceous chondrite meteorite.

Association: Trevorite, diopside, forsterite, ahrensite, clinoenstatite, nepheline, coesite, stishovite, pentlandite, Cu-rich troilite, Al-rich taenite, icosahedrite, decagonite, khatyrkite, steinhardtite, hollisterite, kryachkoite, stolperite.

Distribution: From the Khatyrka CV3 carbonaceous chondrite meteorite found at Listvenitovyi Stream, Koryak Upland, Chukotka, Russia.

Name: The prefix, *proxi*, derived from the Latin word *proximus* indicates a species that is a periodic approximant to *decagonite*.

Type Material: Natural History Museum, University of Florence, Italy (3291/I).

References: (1) Bindi, L., J. Pham, and P.J. Steinhardt (2018) Previously unknown quasi-crystal periodic approximant found in space. *Scientific Reports*, 8, 16271. (2) (2020) *Amer. Mineral.*, 105, 1923 (abs. ref. 1).