Tungsten

Crystal Data: Cubic.  \textit{Point Group}: 4/m 3 2/m.  As polycrystalline grains and masses to 5 mm; rarely cubo-octahedra to 2 mm in dendritic aggregates twinned on \{111\}.


Optical Properties: Opaque. \textit{Color}: Silver white to steel gray, white with a pale yellow tint in reflected light. \textit{Streak}: Gray. \textit{Luster}: Metallic. \textit{Optical Class}: Isotropic. \textit{R}: (400) 46.2, (420) 50.8, (440) 53.2, (460) 54.2, (470) 54.5, (480) 54.8, (500) 55.1, (520) 55.5, (540) 55.8, (546) 56, (560) 56.3, (580) 56.6, (589) 56.8, (600) 57.1, (620) 57.4, (640) 57.6, (650) 57.7, (660) 57.8, (680) 57.7, (700) 57.5

Cell Data: \textit{Space Group}: Im\tilde 3 m.  \textit{a} = 3.1648(4)  \textit{Z} = 2

X-Ray Diffraction Pattern: Bol’shaya Pol’ya river valley.  2.2422 (100), 1.2929 (48), 1.5835 (25), 0.8457 (24), 1.0010 (23), 1.1191 (16), 0.9139 (6)

Chemistry:

\begin{center}
\begin{tabular}{ l c }
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  & (1) \\
\hline
W & 99.27 \\
Mo & 0.06 \\
Mn & 0.04 \\
Fe & 0.01 \\
Total & 99.38 \\
\hline
\end{tabular}
\end{center}

(1) Bol’shaya Pol’ya river valley, Prepolar Urals, Russia; average electron microprobe analysis.

Occurrence: From gold placers in a river valley and in heavy concentrates from crushed quartz.


Distribution: In the Bol’shaya Pol’ya river valley, Prepolar Urals [TL], and in vein #91, Dodo mine, Mt. Neroyka rock-crystal field, Ust-Puiva, Tyumenskaya Oblast’, Russia [TL]. Also confirmed from other localities in Russia; in petroliferous conglomerates of the Volyn, in Ukraine; as inclusions in diamonds in the kimerlites of Shandong Province, China; in the Luobusha ophiolite, Tibet; in gold-bearing placers in South Africa; in the Krymka meteorite and the Luna 16, 20, 24 and Apollo 16 sites on the Moon.

Name: From tungsten for ‘heavy stone’ in Swedish.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA, (63271 - Mt Neroyka and 63272 - Bol’shaya Pol’y river valley); Mineralogy Department, Natural History Museum, London, England (BM 2010,122 - Dodo mine, Mt Neroyka).