Spessartine

Crystal Data: Cubic. Point Group: 4/m 3 2/m. Commonly as euhedral crystals, dodecahedra or trapezohedra, or in combination with other cubic forms, to 10 cm. Fine or coarse granular, compact, massive.


Optical Properties: Transparent to translucent. Color: Red, reddish orange, yellow, yellowish brown, reddish brown, brown, black; pale pink to pale brown in thin section, may be sectored. Streak: White. Luster: Vitreous. Optical Class: Isotropic; may show weak anisotropism. Dispersion: Weak. n = 1.800

Cell Data: Space Group: Ia 3d. a = 11.621  Z = 8

X-ray Powder Pattern: Synthetic.

Chemistry:
\[
\begin{align*}
\text{SiO}_2 & : 35.33 & 36.41 \\
\text{TiO}_2 & : \text{trace} \\
\text{Al}_2\text{O}_3 & : 21.50 & 20.60 \\
\text{FeO} & : \text{trace} \\
\text{MnO} & : 41.06 & 42.99 \\
\text{MgO} & : \text{trace} \\
\text{CaO} & : 1.02 \\
\text{H}_2\text{O} & : 0.86 \\
\text{Total} & : 99.77 & 100.00
\end{align*}
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Polymorphism & Series: Forms a series with almandine.

Mineral Group: Garnet group.

Occurrence: Common in granite pegmatites, granites, and rhyolites. Formed in some skarns and metasomatic manganese-rich rocks adjacent to igneous intrusions or in regionally metasomatized areas.

Association: Quartz, potassic feldspar, tourmaline, rhodonite, pyroxmangite, tephroite, alleghanyite, galaxite, muscovite, topaz, apatite, beryl, albite, bixbyite, pseudobrookite.


Name: For the locality near Spessart, Germany.


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