

Opal

Mineral Reference Profile • Gemstone Varieties

Chemical / compositional reference

$\text{SiO}_2 \cdot n\text{H}_2\text{O}$

Mohs hardness

5.5–6.5

Physical properties

Evaluated by color, transparency, luster, refractive behavior, inclusions, hardness, durability and cut potential.

Geological occurrence

Australia is especially famous; deposits also occur in Ethiopia, Mexico and elsewhere.

Economic, technological and cultural relevance

Jewelry, lapidary arts, cultural heritage, museum collections, scientific education and responsible gem trade.

Museum learning value

In the museum context, Opal is used to connect observation with mineral identification, geological formation, material science, responsible resource use and the relationship between natural resources and society. Specimen-specific analytical data should always be read from the verified museum catalogue or laboratory record.