

Opal Classification

Determine variety, then list characteristics
See 'Opal Terms' for definitions

Variety	
Natural Opal	<ul style="list-style-type: none"> Natural Homogenous Opal (Solid Opal) Natural Opal on host rock Natural Opal in host rock
Composite Opal	Type and composition
Synthetic Opal	Manufacturer/Trade name
Imitant/Simulant Opal	Materials/Composition

Characteristic	
Absorbency	<ul style="list-style-type: none"> Impermeable (<i>Opal that does not absorb water or other liquid</i>) Hydrophane (<i>Opal that does absorb water or other liquid</i>)
Play of Colour	<ul style="list-style-type: none"> Exhibits Play of Colour (<i>Precious Opal</i>) Does not exhibit Play of Colour (<i>Common Opal</i>)
Body Tone	<ul style="list-style-type: none"> Black (<i>N1, N2, N3, N4 on the Body Tone Scale</i>) Dark (<i>N5 or N6 on the Body Tone Scale</i>) Light (<i>N7, N8, N9 on the Body Tone Scale</i>)
Diaphaneity	<ul style="list-style-type: none"> Opaque Translucent Transparent
Treatment	<ul style="list-style-type: none"> No treatment (<i>apart from cutting and polishing</i>) Treatment (<i>detail all treatment/s</i>)

Opal Terms

TERM	DEFINITION
Absorbency	Absorbency in opal relates to the absorption, or loss, of water or another liquid by an opal either when immersed, or exposed in air, under normal conditions. Absorbency varies; some opal is not very absorbent and changes very little in mass or appearance, but in some cases changes to the appearance, mass and/or stability of the opal can be dramatic.
Body Tone	Body tone refers to the relative darkness or lightness of an opal when ignoring its play of colour (if present). It is assessed from the 'face up' or top view of the stone, not the base. On the Munsell scale there are 9 body tone values from black (N1) to white (N9). Opal with body tone of N1 – N4 is Black Opal; opal with body tone of N5 – N6 is Dark Opal; opal with body tone of N7 – N9 is Light Opal.
Boulder opal	Colloquial term for Natural Opal presented in one piece where the opal is naturally attached to host rock.
Common opal	Common opal is opal that does not exhibit play of colour. May have attractive body colour/s, chatoyancy, pattern and/or fluorescence; may be referred to as Ornamental opal. Potch is a colloquial term for some common opal.
Composite	Composite opal is natural and/or synthetic opal composed of two or more components which have been assembled by bonding or other artificial methods. Composites include but are not limited to doublets, triplets, mosaics, inlay and plastic embedded opal.
Crystal opal	Crystal opal is opal with play of colour that is translucent or transparent.
Cutting and polishing	The process of sawing, grinding and polishing a stone from rough; includes carving.
Diaphaneity	Diaphaneity refers to the degree of transparency of a stone. A stone may be: Transparent – allows most light to pass through without distortion. Translucent – allows some light to pass through but does not permit resolution of images viewed through the stone. Opaque – no light passes through.
Face	Presentation face of a stone.
Host Rock	Rock or other natural material serving as the host site for the opal formation.
Homogeneous	Composed of similar parts or elements; of the same composition or structure throughout; uniform. Opposite of heterogeneous. Homogeneous opal is traditionally referred to as solid opal.
Hydrophane	Is opal with or without play of colour that is Absorbent. Hydrophane opal can change appearance, mass and/or stability depending on the amount of water it contains at a given point in time.
Imitation	Imitation opal is material manufactured to simulate or resemble natural opal but that has different chemical composition, optical or physical properties to natural opal.
Impermeable	Impermeable opal does not absorb, or lose water or other liquid, either when immersed, or exposed in air, under normal conditions.
Matrix opal	Colloquial term for Natural Opal in Host Rock; that is, opal presented in one piece where the opal is intimately diffused as infillings of veins, pores or holes or between grains of the host rock.
Natural opal	Opal derived solely from nature presented in one piece in a natural state except for cutting and polishing.
Opal	Opal is a hydrated amorphous form of silica dioxide (SiO ₂ .nH ₂ O).



Opal in host rock	Opal presented in its natural state (apart from cutting and polishing) where the opal is intimately diffused as infilling veins, pores, holes and voids, or between grains in the host rock.
Opal on host rock	Opal presented in its natural state (apart from cutting and polishing) and naturally attached to the host rock as a layer or where there is a substantial amount of opal on the presentation face.
Play of colour	Play of colour is the phenomenon whereby opal may display spectral colours. It is caused by the diffraction of white light. The presence of play of colour identifies the opal as Precious opal.
Precious opal	Precious Opal is opal which exhibits play of colour.
Simulant	A material (natural or man-made) which exhibits characteristics that are similar to opal but that does not have the same physical or chemical properties of opal.
Solid opal	The term 'solid opal' has traditionally been used to describe homogenous opal.
Synthetic	Synthetic opal is a manufactured material with the same chemical composition ($\text{SiO}_2 \cdot n\text{H}_2\text{O}$), microstructure, optical and physical properties as natural opal.
Treated opal	Opal that has been treated in order to change its appearance or properties, for example to change body tone or colour, stability or hardness. Includes, but is not limited to, dying, smoking, painting, coating, impregnation, filling, stabilisation, heating, or enhancement processes of any kind. Both natural opal, and non-natural opal or simulants, can be treated. Cutting and polishing is not considered a treatment.