

Information about Opals

The chemical properties of opal are $\text{SiO}_2 \cdot n\text{H}_2\text{O}$. In other words, opal consists of silicon dioxide, variable amounts of water, and traces of other elements and compounds. It resembles glass in some of its physical properties, but is fundamentally different. This cerebral information about opal is all I am going to give you scientists reading this!

What the wearer of beautiful opal jewelry is mainly concerned about is how much WOW her/his opal puts into their jewelry setting! And no other gemstone can put the dazzling WOW in jewelry like opal does! As Pliny the Elder, 1st Century AD said:

For in them you shall see the living fire of ruby, the glorious purple of the amethyst, the sea-green of the emerald, all glittering together in an incredible mixture of light!

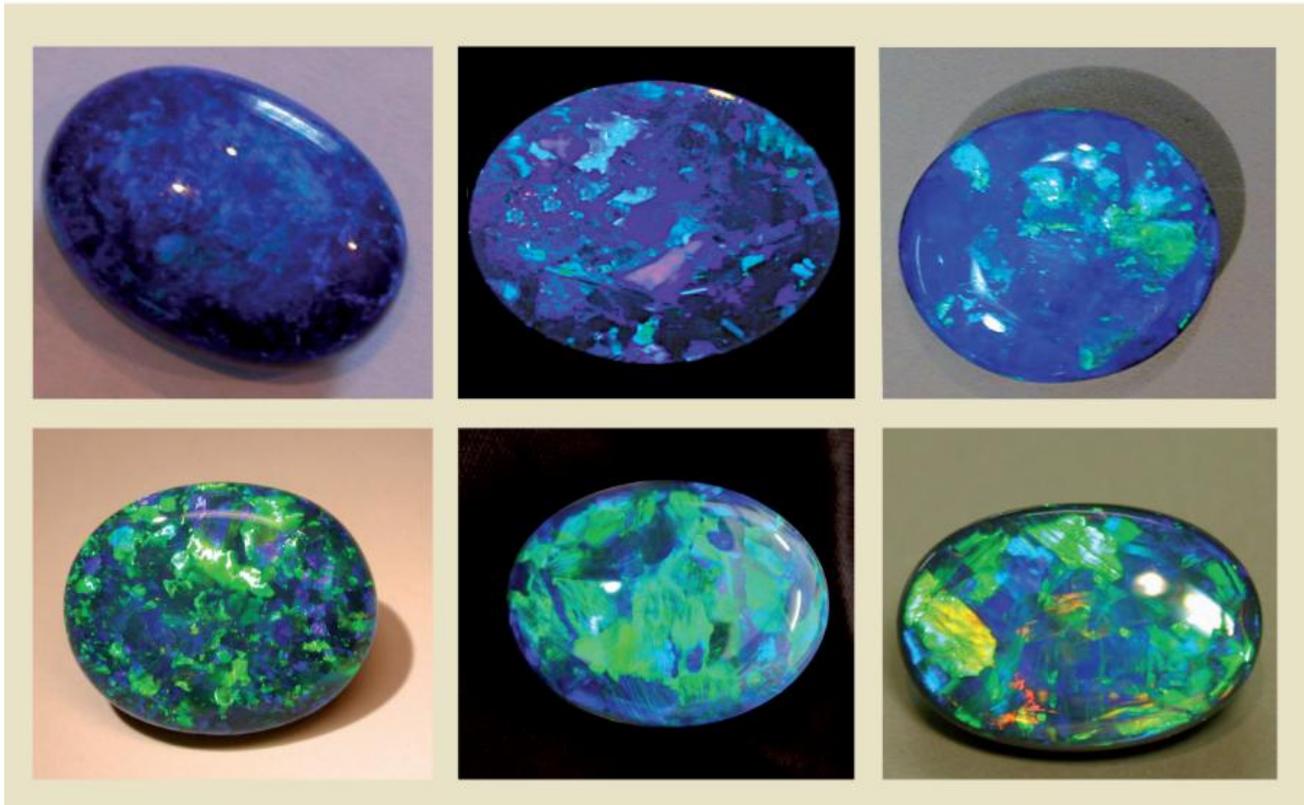
What I see as absolutely great about opal is that no two are alike. They are all truly unique. I often hear my customers say, "I never knew they came in so many different colors!" My response is "they're like human beings, all have their own character, personality and look; you know one when you see one, but they're all different." When I go to trade shows where hundreds of dealers from all over the world are present with every gemstone conceivable, it's at the opal dealers kiosks (the small minority) where you see and hear all the oohs, aaahs and excitement! Even the professionals, who deal and handle jewelry and gemstones every day of their life for a living, never lose their enthusiasm about the infinite variety and beauty of opal. Not to say anything negative about other gemstones, but I've never heard someone say when seeing a diamond, ruby, or emerald "I've never seen one like that before." But you or your loved one will hear that when wearing a beautiful piece of opal jewelry! You or your loved one will know that wearing a particular piece of opal jewelry is wearing something unique that no one else has! You or your loved one will enjoy it for an entire life, and then pass it on to someone you or they love who will fondly remember you or your loved one when they wear it.

Brightness of Fire

The number one or most paramount factor that especially draws people to opal and gives it the majority of its value is **Brilliance** or the **Brightness** of Fire. These two words, brilliance and brightness, are interchangeable terms when speaking in general terms. Below are six opals generally of the same color type, but as you see they become brighter as you read them from left to right like a book. Obviously, the lower right opal exhibits the most beauty because of its brightness or brilliance.

Factors Determining Value

The degree of brightness is of paramount importance. An opal cannot be valuable without this attribute. A gem that glows but is average in all other respects will still command a high price whereas a dull stone, with a very good pattern and range of colours, may bring only an average price. The stone on the bottom right has the highest degree of brilliance.



Photos provided by
Cody Opals (Australia) Pty Ltd

When gemstone appraisers determine the value of an opal, one of the first things they do is assess the degree of brightness the opal has. From a book simply titled “The Guide,” which lists values for all the gemstones in the world, the appraiser determines what the Brightness of Fire Level the opal has that runs on a continuum as follows:

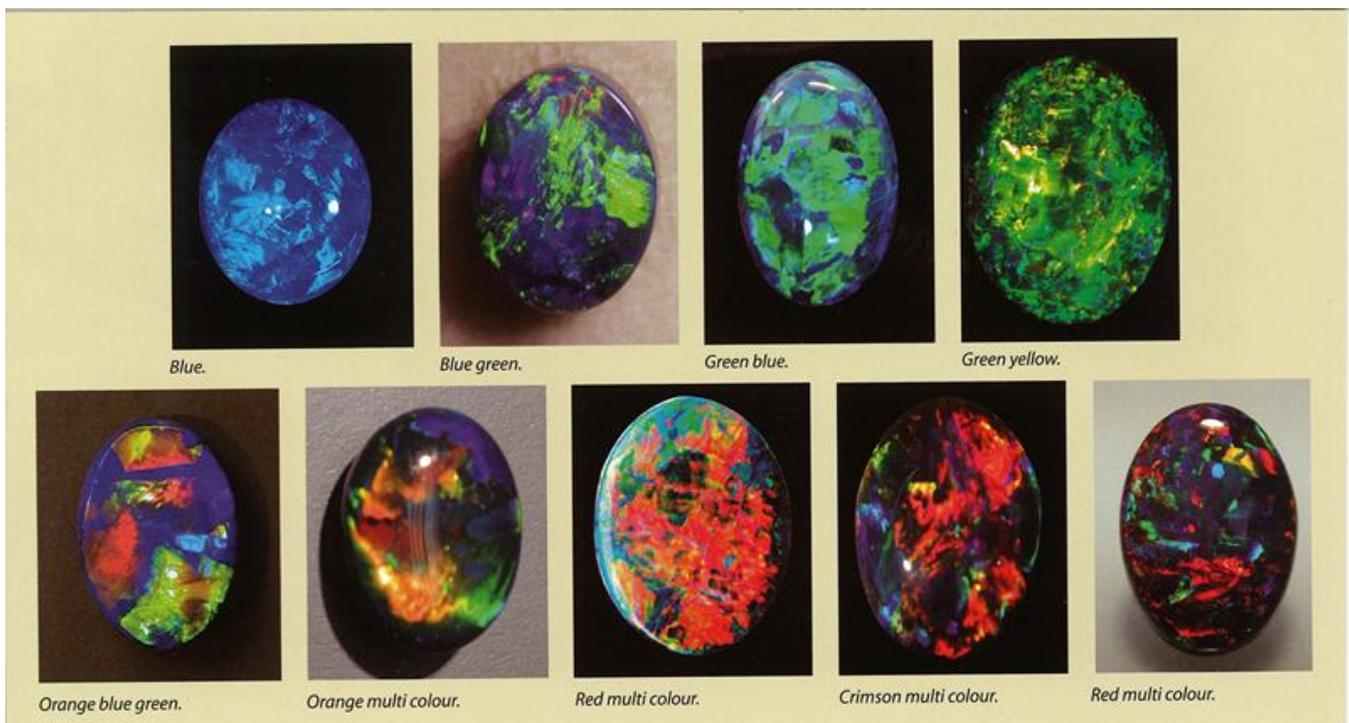
- (1) **Faint:** shows play of color only under direct sunlight and even then the fire is faint.
- (2) **Dull:** shows some color under low light but even under indirect sunlight or the grading lamp the fire is dull.
- (3) **Bright:** shows fair color under low light and very nice fire under indirect sunlight or the grading lamp.

- (4) **Very Bright:** shows good color under low light and sharp crisp color under indirect sunlight or the grading lamp.
- (5) **Brilliant:** shows exceptionally bright Crisp color under indirect sunlight or under Or the grading lamp and often shows even Brighter in subdued light.

I have found most customers enjoy at least a “very bright” level which most of my opal jewelry ranges in. Years ago, and often today, most opal jewelry in the U.S. ranges in the “dull” to “bright” levels. But once the appetite has been wetted, it’s hard to settle for opal jewelry where the Brightness of Fire Level in the opal falls under 4!

Fire Colors Found in Opal

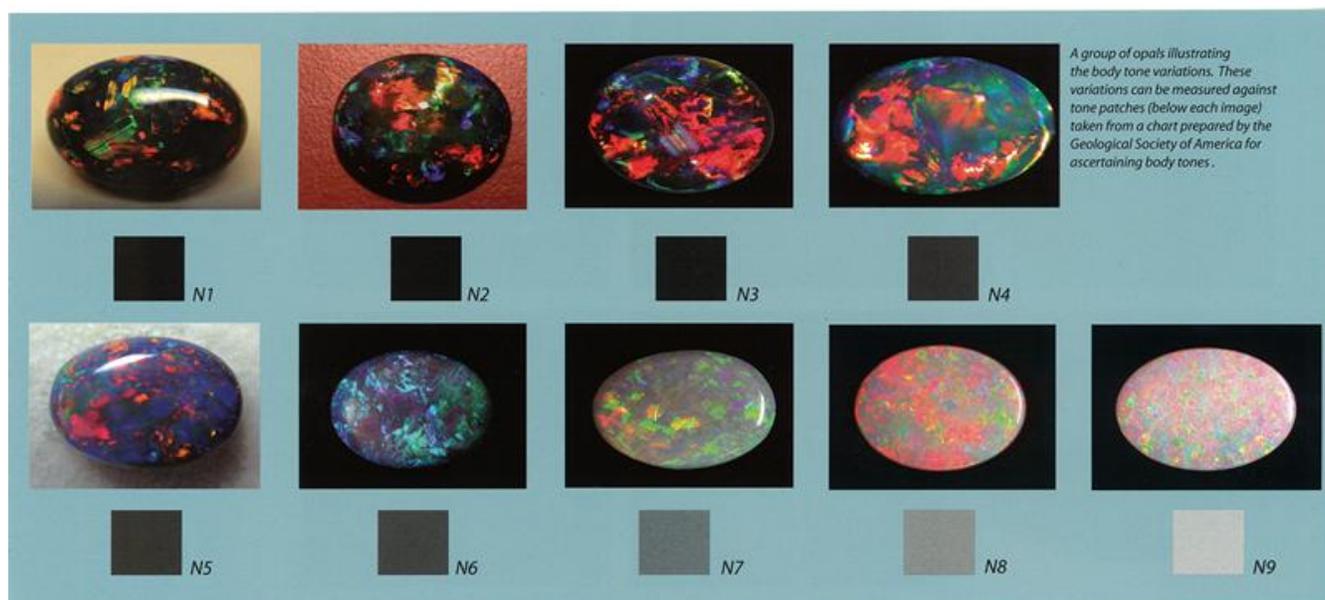
When speaking of solid opal, there are two general colors referred to: fire color and base color. **Fire color** has to do with the kind of colors we find in the rainbow spectrum (i.e. red, orange, yellow, green, blue, indigo and violet). Generally, in any opal we will see some or all of the colors, but the general color arrangements are as shown below:



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Base Colors Found in Opals

The next color we speak of in opal is what is called **base color**. Base colors range anywhere from a dark jet black to a pure white with a number of different shades in between. Below is a chart prepared by the Geological Society of America that illustrates this:

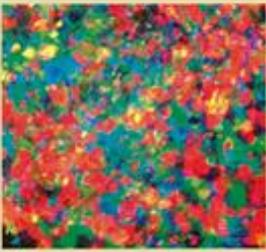


An opal with base color alone in it without any fire colors would simply be referred to as common opal or “potch” (valueless). If an opal has a base color ranging anywhere from N1 to N6, it is referred to as a black opal which is the most rare and valuable of all opal. N7 would be referred to as a semi-black opal, N8 as a gray opal, and N9 as a white opal. One little twist to all this is a base color referred to a crystal base. Crystal opal is transparent rather than opaque. A Crystal opal seems to allow the fire colors to be more vibrant. You can have just a ‘crystal opal’ or anything ranging to a very dark ‘black crystal opal.’

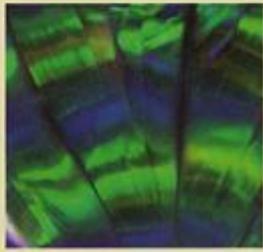
So now we have a language for referring to a particular opal. You could say, for example, “I have a red multi-color black opal ring that is determined to have a brilliant brightness of fire level.” Anyone who understands the above terminology will immediately be able conceptualize what you have (in this example, a very valuable and exquisite opal indeed!).

Patterns

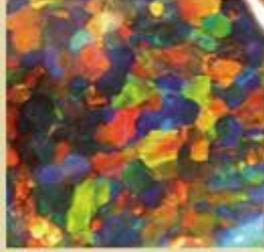
Probably the next thing we notice in an opal is what kind of patterns the particular fire colors are arranged in. Below are a number of examples, but it seems like you never know what you’re going to see next!



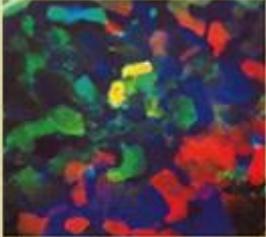
Pinfire.



Peacock tail.



Block.



Jigsaw.



Harlequin.



Flagstone.



Ribbon.



Peacock or fan harlequin.



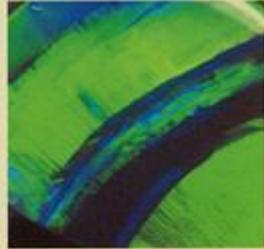
Straw.



Broad flash.



Chinese writing pattern.



Stripes.

The Rolling Flash has a pattern much like a cat's eye - a line of colour which rolls across the face of the stone.



Rolling Flash - view from one direction.



Rolling Flash - same stone as above from the opposite direction.

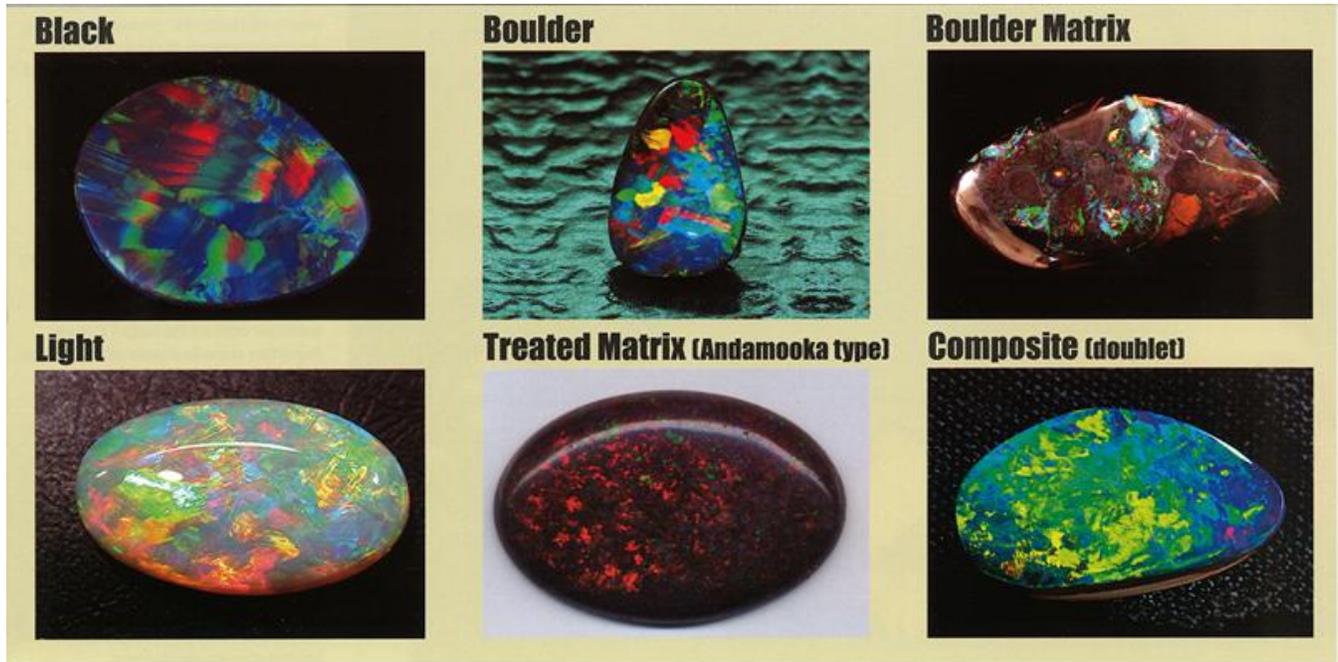


A Broad Flash pattern displayed in a stone known as the "Opera House".

Photos provided by
Cody Opals (Australia) Pty Ltd

Types of Opal

Generally speaking, there are six different types of opals as shown below:



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A few words about several of the different types: Light opal usually refers to either white, crystal or anything less than rated as a black opal. Boulder opal is a seam of solid opal (too thin to cut as a solid opal alone) that runs through a matrix known as Ironstone that has a brownish tone to it. When cut, some of the ironstone stone is left on the back of the opal to give it enough thickness for a jewelry setting. Some call this Mother Nature's doublet. Composite opals are either doublets or triplets. A doublet opal usually has a thin layer of crystal opal laminated onto a backing such as black onyx or ironstone itself. A triplet opal is three pieces consisting of a very thin layer of opal backed by black onyx and covered with a crystal quartz cap. Doublets and triplets are made to save beautiful opal that is too thin to cut as a solid opal. Personally, I have found that solid opal should be at least 3 mm thick to set alone in a jewelry setting. Treated Matrix opal is an opal from an area in Australia (Andamooka) where the white opal is porous enough to take on a black dye as a result of literally cooking it in crock pot of sugar sulfuric acid. They resemble natural black opals, but cost far less.

Ninety-five (95%) percent of the opal has come out of Australia. But it also comes from other parts of the world as well. For example, Mexican Fire Opal, that often has an orange crystal base to it, is also quite popular. A relatively new find of opal is known as Ethiopian Crystal Opal. Right now it is quite affordable and very dynamic and breathtaking! I am beginning to have more of this type of opal in my jewelry settings.

There is more for you to learn about opal. But in this website, I just wanted to give you what I believe is the basic and most important concepts to understand so you can have a better appreciation for this wonderful gemstone . If you have an appetite to learn more, I highly recommend you obtain a copy of ***Opal Identification and Value*** by Paul B Downing, Ph.D. You can order it by calling (970) 586-2411 or Toll Free (800) 468-0324.

A Final Word...

Through much of history, opal has been regarded as a gemstone of good fortune. Unfortunately, in the late 19th and early 20th century, there was a proliferation of damaging reports that opal was a gemstone of bad luck. This occurred most probably for commercial reasons. Queen Victoria adored opal, wore it and gave it away as gifts. A queen definitely can be a fashion setter. Maybe opal was discredited so it wouldn't become the most popular gemstone to give to a loved one. There can be little doubt that much of the modern superstition regarding the supposed unlucky quality of the opal owes its origin to a miss-reading of Sir Walter Scott's novel, "***Anne of Geierstein***." Anyway, opal is a good luck gemstone and there is no other gemstone that offers such warmth, infinite uniqueness and beauty. And above all, opal relates with no uncertain terms, the feelings in one's heart when either acquired for oneself or for a loved one!