



Alexandrite

Unique Hazards	Torch Retipping	Torch Sizing	Pickling & Plating	Files & Abrasives	Polishing	Steamer	Ultrasonic
High cost may dictate more careful handling than physical properties dictate							

Alexandrite is the color-change variety of the mineral chrysoberyl. One of the most valuable colored stones, alexandrite appears red to purple under incandescent (candle) light, and green under fluorescent light and daylight. The strength of the color change helps to determine the stone's

value. Some stones tend to have weak color change that goes from a greenish gray to a reddish gray, as opposed to a very vibrant red to green change.

The traditional source for alexandrite is the Ural Mountains of Russia. Currently, the more prolific sources are Sri Lanka and Brazil.

Enhancements and Imitations

Alexandrite is not known to be treated, but it is one of the most misidentified stones in jewelry today because of the various imitations and synthetics on the market.

Synthetic alexandrite has the same chemical makeup and crystal structure as natural alexandrite, but it's made in a laboratory or factory. Prices for synthetic material are a fraction of those for comparable quality natural, but they vary depending on the method used in the material's manufacture.

Often available in sizes over 1 carat, synthetic alexandrite is very clear and exhibits a strong green/greenish blue to red color change. Microscopic examination by a competent gemologist offers the most reliable means of separating a natural from a synthetic alexandrite.

In our opinion, synthetic color-change sapphire is the stone most often misidentified as alexandrite. Synthetic color-change sapphires are generally worth only a few dollars. They are usually large and tend to have a blue to purple color change (occasionally the change is more greenish blue to purple). The huge value gap between natural alexandrite and synthetic sapphire makes it absolutely imperative for the jeweler to identify correctly any stone taken in for repair.

Another alexandrite pretender worth mentioning is andalusite, which does not exhibit color change, but has strong orange and

Quick Tips

Rock Solid Facts

- Mohs Hardness: 8.5
- Cleavage/Fracture: Conchoidal

Tools That Rule

- A safety-edge file to avoid abrading facet junctions when finishing prongs.

Bench Check

- Have you had a gemologist verify that you are working with a natural alexandrite?

Features and Benefits

- Alexandrite's color change makes it fascinating and unique.
- Alexandrite's durability makes it a good choice for everyday wear.
- Alexandrite is not known to be routinely treated—a huge selling point in today's treatment-laden jewelry trade.
- Alexandrite is recognized as one of the June birthstones.

Picture This

The same four stones pictured in fluorescent light on the left and incandescent light on the right. The marquise is a synthetic alexandrite, the oval is a natural alexandrite, the pear is a synthetic color-change sapphire, and the triangular cut is an andalusite. Note how the synthetic sapphire has a blue to purple change, while the alexandrites (synthetic and natural) change from green to purple. The andalusite shows little difference in color.

> The same four stones pictured in fluorescent light on the left and incandescent



< Although alexandrite is very hard, the fluorescent light reflected off the table shows that the gemstone's surfaces can be scratched and abraded.



> This ring set with a synthetic alexandrite shows the typical color change from greenish blue (left) to purplish red (right) under different light sources.



green pleochroism that causes it to be mistaken for alexandrite. Standard gemological tests will clearly separate imitations from natural alexandrite.

Clean It

Alexandrite is very tough and very hard. Both steam and ultrasonic cleaning are considered safe. Other than andalusite, most stones mistaken for natural alexandrite can be cleaned by steam or ultrasonic.

At the Bench

It is worth noting that the high value of alexandrite may influence how it is handled at the jeweler's bench. Despite its resilience, you may want to remove the stone from the setting if you are dealing with an especially large or strongly color-changing gem. Alexandrite is very hard to replace with exact color

matches; therefore, many jewelers opt to treat it as they would a much more delicate stone.

Alexandrite is generally easy to work with at the jeweler's bench. Retipping should be avoided due to the expense of the stone, but sizing and other torch work can be done with an alexandrite in place. Also, pickling acids do not affect the stone. However, as with any colored stone, avoid thermal shock by letting a jewelry item air-cool prior to pickling.

When working with alexandrite, use a safety-edge file. Although it's one of the hardest gemstones, you can damage alexandrite by accidentally filing facet junctions while finishing prongs.

Care for Wear

Alexandrite is very easy to wear. The hardness and toughness of the stone eliminate the need for special care. As with any colored gem, professional cleaning is recommended, as accumulated dirt gives the gemstone a dull appearance.