

## Beryl [ $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$ ]

The name “beryl,” comes from the Greek name *beryllos* meaning “a blue-green gem.” Beryl is quite durable with a Mohs hardness between 7.5 and 8. Its diverse colors are caused by small amounts of elemental impurities: chromium and vanadium create emerald (green), beryllium and ferrous iron create aquamarine (blue), manganese and cesium create morganite (pink) and beryllium and ferric iron create heliodor (yellow). Heliodor is a very rare mineral because of its few internal flaws. The largest cut heliodor is a 2,054-carat stone displayed in the Hall of Gems in Washington, D.C.; it is valued at a quarter of a million dollars.



**Beryl var. Aquamarine** PK17



**Beryl var. Aquamarine** B23



**Beryl var. Aquamarine** B53

### **Beryl var. Aquamarine with Muscovite**

As an extremely valuable variety of the mineral beryl, aquamarine exhibits a hexagonal crystal shape and a blue-green color. Most samples of aquamarine usually weigh only a few carats and are no larger than a penny, although large samples of aquamarine weighing over 200 pounds have been discovered. An important chemical component of all beryl is beryllium, which makes up only 0.0002 percent of the earth’s felsic crust. The small quantity of beryllium present in the crust is the reason all varieties of beryl are rare, attractive, valuable and highly collectible. PK35



*Beryl var. Aquamarine* OR4



*Beryl* PK35



*Beryl var. Aquamarine* P15

### **Morganite var. Beryl**

Morganite is a peachy-pink variety of beryl and is a part of the same mineral family as emeralds and aquamarines. Its pink color is a result of trace amounts of manganese and cesium—rare elements—found in the surrounding environment. Morganite was discovered in California during the early 20th century, and small deposits have also been found in Brazil, Namibia and Russia. Quality samples remain relatively rare, and its durability, luster, clarity and lack of inclusions make morganite immensely suitable for jewelry. B3



*Beryl . B3*



*Beryl var. Heliodor G7*



*Beryl var. Heliodor B9*

### **Beryl var. Emerald**

Emerald, a variety of the mineral beryl, gets its color as a result of trace amounts of chromium. Most emeralds have elemental impurities that lower their mineralogical value. Because of this, emeralds, like many gemstones, are graded using four basic parameters known as the Four C's: Color, Cut, Clarity and Crystallization. Specimens that have a deeper blue color, a desirable mineral cut, are clear of inclusions, and are crystallized completely are graded much higher—and valued significantly more—than those with weaker color, unappealing cut, and having poor clarity and crystallization. PK31



*Beryl PK31*



*Beryl B61*

Emeralds have been quoted as the most valuable mineral in the world. They have been discovered in the Ural Mountains in Russia, where they occur in mica or chlorite schists in metamorphic, pegmatitic veins. A very distinctive characteristic of emeralds, as with all beryl, is its hexagonal crystal shape and its extreme hardness of 7.5-8. Emeralds have been cut and mounted in jewelry dating back to the 17<sup>th</sup> century, and have become a symbol for wealth, power and prestige.