

Chrysoberyl

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Chrysoberyl is an oxide of the two elements beryllium and aluminum, and its chemical formula is BeAl_2O_4 . One of the less known and rarer gem stones, it occurs in a variety of yellow to green shades. Its name comes from the Greek word *chrysos*, meaning gold. It is one of the hardest minerals on earth, and its hardness of 8,5 on the Mohs scale makes it an ideal gem stone.

More important, however, are its two varieties—chrysoberyl cat's-eye (cymophane) and alexandrite. If cut cabochon, the former shows a bright bluish streak of light running over its surface. This is particularly effective because, unlike quartz cat's-eye, the gems are almost transparent and achieve an ethereal effect. The phenomenon is caused by microscopically small hollow tubes that run parallel through the stone and in most cases are almost impossible to detect. The clearer the streak of light, the more valuable is the stone.

A truly exciting and mysterious gem is the alexandrite, for it appears green by daylight and red in artificial light. These stones owe their color to small quantities of chromic oxide. When light rich in green rays (daylight) falls upon them, they appear green, while artificial light, rich in red rays, makes them appear red. The finest alexandrites are those that are emerald green and ruby red under the correct respective illumination, but such stones are rare and expensive and rank among the finest specimens of gem stones in the world.

The name has its origin in Russia, for, early in the nineteenth century, on the occasion of the coming-of-age ceremony of Tsar Alexander II. such a stone was presented to him as a gift.

The yellow and green chrysoberyl and chrysoberyl cat's-eye are found as pebbles in Brazil and Ceylon. The finest alexandrites occur in the Ural Mountains, often in association with emeralds. Larger alexandrites come from Ceylon, but these stones do not have such an impressive color change