

Price Chart Toppers : Some Expensive Gemstones: Part 3

7. Alexandrite – \$12,000 per carat



Alexandrite is a rare variety gemstone from Chrysoberyl family, having a chemical formula BeAl_2O_4 . Colour causing element in alexandrite is Chromium at substitutional site of Aluminium in its crystal lattice. Its specific gravity is 3.5-3.84 and hardness is 8.5 on mohs scale. Alexandrite was discovered in Ural Mountains in Russia in 1830s by Count Lev Alekseevich Perovskii. In honour to the then Russian Czar Alexander II, it was named as Alexandrite. Often described as “Emerald by Day and Ruby by Night”. It is a popular gemstone because it shows a unique phenomenon called metamerism, that shows drastic changes in its colour under different lighting conditions. It is greenish blue under natural light and becomes reddish purple in incandescent light. Colour changing effects due to Daylight and Incandescent lights are richer in different wavelengths. Apart from the colour changing, it is a strong pleochroic stone. Due to its high hardness, it is suitable for any type of jewellery setting without any special care.

8. Jadeite – \$20,000 per carat



Jadeite is a beautiful and rare variety of Jade. It belongs to pyroxene group having chemical formula $\text{NaAlSi}_2\text{O}_6$. It occurs in many colours like mauve, lavender and apple green, but rich emerald green variety ‘Imperial Jade’ is most popular. The finest stones in this color can be

found in Myanmar. It has hardness of 6.5 to 7 on mohs scale and specific gravity of 3.24-3.43. Jadeite pieces are extremely tough and strong resistance to breaking. Because of this extreme toughness, it has been used for making carving, jewellery, historical weapons in Chinese, Maori and Meso-American culture. Most of the jadeite pieces are opaque and translucent variety of jadeite is priced at premium due to its rare occurrence.

A Cartier jadeite bead, ruby and diamond necklace owned by Woolworth heiress Barbara Hutton (1912 – 1979) was sold for more than \$27.4 million at Sotheby's Hong Kong Magnificent Jewels.

9. Musgravite – \$35,000 per carat



Musgravite is an extremely rare gemstone belonging to taaffeite family. The chemical formula is $(\text{Mg,Fe,Zn})_2\text{BeAl}_6\text{O}_{12}$. Its hardness is 8-8.5 on mohs scale and specific gravity 3.62-3.68. It was discovered in Musgrave Range in South Australia and thus its name. It is also found in other locations at Greenland, Madagascar and Antarctica, in limited quantity. The first sizeable gem quality specimen were found in 1993. As of 2005, only 8 such specimen exist. Due to its extremely rarity, it is difficult to find this stone in open gem market. If you encounter such stone it should be submitted to a gemmological lab for authentication.

10. Blue Diamond – \$3.93 million per carat



Diamond, the most popular and expensive gemstone, is made of one element Carbon. Carbon atoms in diamond are arranged in cubic crystal system It is the hardest natural substance

found on the earth having a hardness of 10 on the mohs scale with a specific gravity of 3.52. The price of a diamond depends on a lot of factors, Colour being one of them. Primarily diamonds are colourless in their pure form though yellow and brown colours are also commonly found. Any other colour than these three is termed as “fancy coloured diamonds” and command a high price. The price of a Blue or Red diamond is much more than same size Colourless or “D” colour grade diamond, irrespective of clarity, because of the rarity of these colours. Colour in diamonds is due to the structural defects and these are called optical centres. Optical centres in combination with impurities like nitrogen and boron cause colour in diamonds. A wide range of colour diamonds like Yellow, Blue, Red, Green, Pink, Brown and Black are found but are very rare. Among all the colours, Blue diamond is one of the rarest colour diamonds found in nature which is due to the presence of Boron in carbon lattice. Blue colour ranges from light blue to deep blue with secondary hue of violet, grey or green. The famous blue colour ‘Hope diamond’ and ‘Wittelsbach-Graff Diamond’ were found in Kollur Mines, Andhra Pradesh, India. Some blue diamonds are also found in Cullinan Mine in South Africa. The Oppenheimer Blue is one such famous diamond. It is a 14.62 carat Vivid Blue diamond, which was initially owned by Sir Philip Oppenheimer, the former chairman of De Beers. It was found in the Cullinan diamond mine and was fashioned in to a Rectangular Emerald cut. It was sold at Christie’s auction for \$50.6 million.

Bibliography

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