

The Diamond Registry Established 1961

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Almost a girl's best friend? C3 CEO: New product is no rival for fine diamonds

by Martin Galasso

In 1995, a master diamond cutter took one look at a large, single crystal of silicon carbide and praised its diamond-like qualities. He cut a few stones with dramatic results. Three days later "C3" was formed to manufacture and market simulated diamonds made from silicon carbide. Synthetic moissanite is a manufactured version of the rare mineral moissanite that was found in a Diablo Canyon meteorite by the French Nobel prize winner, Henri Moissan in the late 1890s. A few years later, the name moissanite was applied to the chemical name silicone carbide to honor its finder.

Today, C3 is rapidly developing its Morrisville, North Carolina business to become a large-scale producer and marketer of this new artificial gemstone. Cree Research of Durham is the sole supplier of synthetic moissanite, with patents on the manufacturing processes. C3 also has patents pending on the use of silicone carbide as a gemstone material.

Similarities between moissanite and diamonds are significant. Moissanite has a hardness of 9.25 on the Mohs' scale, compared to diamonds' 10. Moissanite also has a refractive index that is higher and closer to diamonds than cubic zirconia, and its high thermal conductivity transmits the same readings as a diamond on standard heat conductivitybased diamond testers.

C3 President Jeff Hunter, explains that moissanite stones have sharper edges and facets, with the greater the likelihood of high brilliance and dispersion, making them closer to a diamond and far exceeding the qualities of cubic zirconia. "Also, cubic zirconia has suffered from a public relations problem because of its tendency to change colors, [so] moissanite's inert qualities make it more attractive to jewelers and consumers," he said.

C3 will offer moissanite to retail jewelry chains and high-volume independents within the next few months. Hunter outlined the benefits for moissanite in the retail market. "One of the key cost savings in the manufacture of jewelry is that you can cast in place. Because this material will withstand temperatures far in excess of 1000 degrees centigrade.

"We see this product as one that fits in the bridge jewelry market," he related. "It's not costume jewelry and it isn't going to compete with fine diamonds in the \$10,000 range." But, he said, it will be color and clarity-graded like diamonds. C# will be shipped in February in initial sizes of less than 1/2 carat and followed with sizes of .10 to one ct. C3 will be priced at 5 to 10 percent of comparable diamonds at retail. Cubic zirconia would be five to 10 percent of the [price of] moissanite product, on average, depending on the quality of the setting and the retailer." C3 will grade the moissanite stones on the same basic scale as diamonds, collapsing the wide scales to offer one-half to one carat sized stones within specific color and clarity ranges.

Not unexpectedly, reaction to moissanite has been mixed. "Over one-third are incredibly excited," he explained. "These jewelers are anxious to get their hands on moissanite to extend their portfolio. On the other end of the continuum, reaction has been very negative and they are wondering why C3 would introduce a product that could create potential problems." Historically, gemologists have used density fluids to differentiate between cubic zirconia and diamonds. Moissanite floats in a specific gravity fluid calibrated for a density of 3.32, while a diamond sinks. While a challenging (the fluid is toxic) procedure, it is certainly the most accurate way to distinguish between the two — although only for loose stones.

Hunter and his C3 associates have been educating jewelers and others on the properties of moissanite to assist in distinguishing moissanite from diamonds and reduce the fear factor. C3 has also developed a device that enables jewelers to distinguish between moissanite and diamonds. We are not interested in any consumer being defrauded by this product," he explained. "We are providing a test instrument to assist the trade, appraisers and consumers to help ensure that the product is not misused."

Hunter notes that companies that specialize in copy jewelry have shown great interest in moissanite. "Copy jewelry for someone who has a substantial investment in diamonds," and are concerned with wearing this jewelry frequently, can have a moissanite replication that is virtually indistinguishable.

Rare in nature and not commercially viable as a natural product, moissanite creates yet another chapter in the simulated diamond story.

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