

# PMC CONNECTION GEMSTONES FOR FIRING INTO PMC3

## TESTING QUESTIONABLE GEMSTONES

### LABORATORY GROWN GEMS

The gems that you can count on to fire and which will not change color, crack or melt are man made, laboratory created synthetic stones. They are the same chemical composition as the natural stones. Most are perfect, without inclusions, and are made with a high temperature process. This speeds the process which takes nature hundreds of years. Because they do not have inclusions, the heat of the firing will not fracture the stones. At the same time, you must be careful not to cause thermal shock by reducing the temperature of the piece too rapidly after firing. This can result in damaged stones.

### SYNTHETIC

Synthetic is a term which can mean any type of man made gemstone. This could be a duplicate of the chemical and physical properties of the natural stone or an imitation of the natural stone through the use of other materials, such as glass or even plastic. Therefore, you need to ask for laboratory grown stones.

Be careful of doublets. They may be laboratory grown but have two layers. The bottom layer usually is colored while the top layer is clear. The top clear layer may melt. This, however, can be an interesting technique if you know it is going to happen. Examples of doublets are emerald and peridot.

### Cubic Zirconium

CZ's are beautiful in the clear form and look like diamonds. Most of the colored CZ's fire well. The CZ's which are available through PMC Connection are tested to assure quality and great color. If you or someone you know has not used CZ's from a particular source, we suggest that you test a sample to assure color and structural stability.

### NATURAL STONES

You can fire some natural stones but usually they are at least a 7 on the Mohs scale. This would include stones such as granite, quartz and the corundum family. Bone, fossils, turquoise, etc. are low on the Mohs scale and will fracture and even powder in the kiln at 1110° F. Even stones which may not crack may change color. These include many quartz gemstones, such as amethyst. We are finding that many natural stones can tolerate the lower temperature (1110° F) of PMC3.

If you really want to try a stone to see if it will work, test your stone at 1110° F for 45 minutes in the kiln before adding silver. If the stone is too soft or too precious to test, then plan on a setting where you can place the stone after the firing. You can set fine silver bezel wire into the PMC and fire it in place. After firing, place the natural stone using traditional jeweler's techniques.