



## Mineral Accents

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**Mineral Accents** are materials offered by Jewelry Material Innovations, Inc. (JMI) in a variety of colors for adding accents, or enhancements, to jewelry settings. They are prepared from large pieces of colored cubic zirconia (CZ), corundum, and other minerals by a proprietary process that yields particles suitable for inlaying into jewelry settings. The particles exhibit high reflectivity and sparkle because of the many facets created by the fracturing process. They are available in a wide range of beautiful colors that span the visible spectrum. JMI recommends that they be inlaid into recessed regions of jewelry (similar to the champlève' process for enameling) so that the sides of the recessed regions provide protection against abrasion. A number of methods exist for attaching **Mineral Accents** to jewelry settings, as described in JMI's information sheet, "**Instructions for Attaching Mineral Accents to Silver Clay Settings.**"

Depending on their color, **Mineral Accents** respond differently to the high temperatures required to fire silver clay. Many retain their original color when fired to 1650F for 30 minutes. Some **Accents** change color when fired to 1500F or 1650F. The color stability of **Mineral Accents** is described in the table entitled "**Color Stability of JMI's Mineral Accents and Gold**" on the next page. JMI's "**Instructions for Attaching Mineral Accents to Silver Clay Settings**" provides guidelines for attaching **Mineral Accents** while retaining their original colors.

You can use the lustrous sparkle of **Mineral Accents** in colors of your choosing to create strikingly beautiful effects in both silver and gold jewelry. For example, they can add a customized drusy look to your jewelry. They are more affordable than color-coated drusy specimens, do not require forming your jewelry around pre-shaped cabochons, and are available in a wider range of colors. Also consider using complementary colors in a setting, such as Purple Gold and Specular Hematite. **Mineral Accents** will challenge your artistic imagination and provide you with a distinctive new medium with which to set your jewelry apart from the norm.

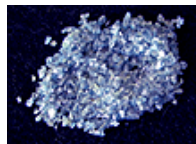
**Mineral Accents** can also be applied to sterling silver settings. If a method of attachment is selected that involves heating the setting above about 840F (450C), undesirable fire scale may form that will require subsequent removal by pickling or polishing. *Depletion gild* the sterling setting before using any method that requires a high temperature, which will eliminate the need to remove fire scale afterward.



## Color Stability of JMI's Mineral Accents & Gold

Minerals	Is Color Stable?			Attachment Methods <sup>1</sup>
	1200F/35 min.	1500F/7 min.	1650F/30 min.	
Various Minerals				
Colorless - CZ11	Yes	Yes	Yes	1,2,3,4
Lavender-CZ14	Yes	Yes	Yes	1,2,3,4
Amethyst-CZ14a	Yes	Yes	Yes	1,2,3,4
Orange-CZ16	Yes	Yes	Yes	1,2,3,4
Garnet-CZ18	Yes	Yes	Yes	1,2,3,4
Violet-CZ19a	Yes	Yes	Yes	1,2,3,4
Royal Blue-S20	Yes	Yes	Yes	1,2,3,4
Ruby - C10	Yes	Yes	Yes	1,2,3,4
Medium Green-YAG-G12	Yes	Yes	Yes	1,2,3,4
Peridot-CZ13a	Yes	Yes	Turns "raw diamond"	1,2,3,4
Aquamarine-CZ28	Turns peridot	Turns light amber	Turns light amber	4
Blue Sapphire-CZ29a	Turns green	Turns pale grn.	Turns dark amber	4
Light Green-CZ32	Yes	Turns lighter grn.	Turns dark amber	1,3,4
Deep Emerald Green-CZ36	Yes	Yes	Turns brown	1,2,3,4
Apatite-AP	Yes	Yes	Turns colorless	1,2,3,4
Rainbow Hematite-RH	Yes	Yes	Turns reddish	1,2,3,4
Specular Hematite-SH	Yes	Yes	Yes	1,2,3,4
SiChrome™				
SiChrome™ Blue-SB	Yes	Yes	Yes	1,2,3,4
SiChrome™ Gold-SG	Yes	Yes	Yes	1,2,3,4
SiChrome™ Teal-ST	Yes	Yes	Yes	1,2,3,4
Gold				
Accent Natural Gold™-ANG	Yes	Yes	Yes	1,2,3,4
Accent Purple Gold™-APG	Yes	No	No	1,3,4
Accent Blue Gold™-ABG	No	No	No	4

<sup>1</sup>Refer to JMI's "Instructions for Attaching Mineral Accents to Silver Clay Settings"





## **Instructions for Attaching Mineral Accents to Silver Clay Settings**

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### **Methods of Mineral Attachment**

*These instructions were provided courtesy of Tonya Davidson*

This section describes four ways to attach Mineral Accents to silver clay. The selection of which to use is governed partly by the stability of the mineral color during heating, and partly by their difficulty of use. It is highly recommended that the artist practice using these methods with small pieces of silver clay before applying them to actual jewelry settings.

Note: Don't water quench settings containing cubic zirconia and apatite because the particles will crack. Allow the settings to cool slowly in the kiln.

#### **Method 1 –High Temperature Method #1**

Note: Use this method for large (several mm) pieces of Mineral Accents only. Smaller pieces may come loose from the setting after firing.

- i. Create the setting.
- ii. Press Mineral Accent pieces into the setting before it dries.
- iii. Fire
  1. Fire at temperatures up to 1650F if color is stable at that temperature
  2. If color is not stable, fire at 1200F for 35 minutesA natural doming of the silver clay occurs during firing that helps capture the individual pieces.

#### **Method 2 –High Temperature Method #2**

This method can be used with Mineral Accents that can be fired to at least 1500F. It works well for all sizes of particles, and it is the recommended high temperature method for attaching small (less than 2-3 mm) particles.

- i. Create the setting.
- ii. Form a channel to receive the mineral pieces, either by
  1. using a syringe of PMC3, or
  2. sculpting the channel directly into the setting.
- iii. Dry, and then fire the setting.
- iv. Tumble the setting, which will create a lustrous finish within the channel to produce reflectivity after the Mineral Accent has been added.
- v. Make a slurry of a powdered glass enamel (such as Thompson Enamel 2010 or 2020 product) and Klyr-Fire or a similar water-base medium. Klyr-Fire is Thompson Enamel's water-base medium for adhering powdered enamels to metallic surfaces prior to firing.
- vi. Put the slurry into the channel, and then press the mineral particles into it.



- vii. Dry the slurry thoroughly, otherwise it will spatter and crack during firing. Finish by drying on a warm surface. Ensure that all Mineral Accent particles are in contact with the dried enamel.
- viii. When the slurry is thoroughly dry, fire the piece to 1500F for about 7 minutes and then allow it to cool in the kiln.

### **Method 3 –High Temperature Method #3**

Note: Use this method if firing can be performed only to 1200F. It works better for larger particle sizes, as for High Temperature Method #1.

- i. Create the setting.
- ii. Deposit a strip of PMC3 on the setting with a syringe with the end cap removed (to create a wide strip).
- iii. Create a channel in the strip.
- iv. Press Mineral Accent pieces into the channel.
- v. Mold the clay around the pieces to hold them in place.
- vi. Dry, then fire at 1200F for 35 minutes.

### **Method 4 –Room Temperature Method**

This method was used by Hattie Sanderson in making the Empress Ring with purple gold, as described in the September 2005 issue of Art Jewelry Magazine. It works well for all Mineral Accents.

- i. Create the setting
- ii. Form a channel to receive the Mineral Accent pieces, either by
  - 1. using a syringe of PMC3, or
  - 2. sculpting the channel directly into the setting.
- iii. Dry, and then fire the setting.
- iv. Tumble polish the setting, which will create a lustrous finish within the channel to produce reflectivity after the mineral particles have been added.
- v. Mix clear two-part jeweler's epoxy resin, or a similar resin such as Colores (from Rio Grande), and place it into the channel.
- vi. Press the mineral pieces into the resin and allow the resin to cure at room temperature. Do not completely cover the pieces, or much sparkle will be lost.

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### **Product Notice and Caution**

**Mineral Accents are easy to use, non-toxic, and relatively safe. However, the particles have sharp edges and corners, and therefore they can be a severe eye irritant. Be careful during handling to avoid getting any particles into the eyes. Do not touch your eyes during handling of this product. If particles do get into the eyes, flush them with water and then see a physician immediately to remove any remaining particles. Work safely, wear gloves, keep particles away from your eyes, and wash your hands immediately after handling this product. Because JMI has no control over how these products are used, it assumes no liability for any injuries resulting from their use.**