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Jeweler's Bench Guide to Charles & Colvard® Created Moissanite

Charles & Colvard® Created Moissanite, at 9.25 on the Mohs scale, is second in hardness only to diamond (10.0 on the Mohs scale) and is also exceptionally tough. Guidelines for working with this jewel are offered here.

Setting

You may handle this jewel as you would a diamond and experience a very low percentage of breakage. Steel tools (gravers) used in setting processes have a hardness of 6 and will not scratch this jewel. However, like diamond, Charles & Colvard Created Moissanite does have cleavage directions that will cause the jewel to chip if these tools are pressed hard against a sharp girdle or facet edge of the jewel. Also like diamond, they may chip if crowded against an adjacent jewel so that girdle edges are forced against each other during the setting process. Special care should be taken to leave some space between one jewel and the next in a mounting.

Prong Work

If bearings (seats) are properly made in each prong, the jewel should pose no problem. In settings with pre-cut bearings, you must be sure that the lower section of the bearing is parallel with the pavilion facets of the jewel. If not, shape the lower part of the bearing so the jewel fits into it instead of being pushed up against a curved edge. In such cases, the point of contact acts as a fulcrum, and even slight pressure may chip the girdle (this holds true for diamonds as well). Look at the contact between the jewel and the bearing. If there is an open space next to the girdle, then the bottom edge of the bearings needs to be adjusted.

Bead Work

Girdles should be fitted slightly below the metal surface and beads raised above the girdle rather than against it. Girdle edges on both diamond and Charles & Colvard Created Moissanite may chip if direct pressure is applied against them.

Hammer Work

If bearings are properly cut, you may use your electric hammer to move metal above the girdle onto the jewel. Trimming the inside of the fold with a graver should not pose any problems. Burnishing should be done on the metal over the jewel, not against the jewel.

Trimming Metal Prongs

If you use abrasive wheels to trim prongs after setting, be sure that the wheels are made of rubber (not stone) and do not contain either silicone carbide (carborundum) or diamond abrasives. These will scratch the jewel on contact and require repolishing of the scratched facets. If the wheels are of hard rubber avoid contact with the girdles of the jewels. Rio Grande is happy to supply information regarding the abrasives in the rubber wheels we sell.

If you use files to trim the prongs, avoid passing the file over sharp facet edges or the girdle edges. Files will chip, not scratch the jewel. One way to avoid the rough file catching on a jewel's edge is to use a three-corner file and grind down and polish the corners. This will allow you to trim the inside of a prong with the file while only the polished corner edge is touching the jewel.

Polishing

You can use any abrasives used to polish gold or platinum with Charles & Colvard® Created Moissanite. You may heat- or steam-clean as you would with diamond. This jewel has excellent thermal properties. Do not tumble-polish jewelry that includes set jewels–even diamonds will scratch during this process.

Ultrasonic Machines

Single pieces will cause no problems in ultrasonic cleaners. If you clean a number of pieces, they should be arranged on hooks so jewels do not bounce against each other. Metal and all kinds of jewels will scratch during the ultrasonic process if the pieces touch each other. You may use the solution either hot or cold.

Repairs and Sizing

You can perform repairs with Charles & Colvard Created Moissanite in place. Be sure the jewel is properly cleaned before applying the torch and be sure torch heat does not exceed the solder-melting point. This jewel can be cast in place, but some torches are capable of extreme ranges of temperature and may cause damage. Upon heating, the jewel will turn a cherry red color, but will return to its original color when cool. When repairs are made using platinum solder, the solder tends to run onto the jewel. Using white gold solder does not present a problem. Quenching should be done after a few seconds.

Acids

You may "pickle" the repaired pieces as with diamond.