

# Product Data



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## G-1117 CLEAR BRUSHING CULTURED MARBLE GEL COAT

HK Research clear high molecular weight NPG/ISO Gel Coats are unsurpassed in the Cultured Marble Industry for their superior properties. The 100% NPG-Isophthalic resin base provides products that are unique in physical characteristics. They provide the Cultured Marble manufacturer with a clear colorless, hard, stain and abrasion resistant surface for cultured marble. When used in conjunction with high quality matrix resins and good manufacturing procedures, these gel coats will easily provide 3000+ cycles in the CMI hydrothermal shock test (LS 2-76, ANSI Z124.3).

### COLOR

The color of HK Research Clear NPG/ISO Gel Coat series is effectively controlled through the most modern electronic instrumentation. The color difference values of a 20 mil (cured) film are as follows and are expressed as change in color when backed by "pure" white:

$$\begin{aligned}L &= -4.0 \text{ to } -6.0 \\a &= -1.0 \text{ to } +1.0 \\b &= -1.0 \text{ to } +1.0\end{aligned}$$

G-1117 Clear Brushing Gel Coat incorporates all of the above features and is especially formulated for application by brushing rather than the more conventional spray techniques. This special formula permits easy brushing while exhibiting excellent air release and leveling to minimize the appearance of brush strokes.

## TYPICAL PROPERTIES

Weight Per Gallon, 77°F:	8.83 lbs.
Specific Gravity, 77°F:	1.06
Viscosity, Brookfield, 77°F 12 RPM:	800 - 1,200 cps
Gel & Cure Properties: Cup Gel Time	8 - 10 minutes
(2% MEKP* @ 77°F) Film Gel Time	15 - 25 minutes
Film Cure Time	45 - 60 minutes
Shelf life, Uncatalyzed @ 77°F	3 months minimum

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\*RCI 46-702 or Equivalent

## APPLICATION

G-1117 is specifically formulated for application by brushing and would not be suitable for spray application. This clear gel coat must be catalyzed with 2% by weight of Methyl Ethyl Ketone Peroxide (MEKP) and mixed thoroughly before application. The gel coat should then be applied with smooth, even brush strokes to the properly prepared mold surface and carefully brushed to obtain a film thickness of about 20 mils. Care must be taken to apply even pressure on the brush so as to prevent the buildup of thick and thin "ridges" of gel coat. Keep in mind that the gel time of this gel coat is about 10 minutes @ 2% MEKP so all mixing, brushing, and equipment cleaning must be accomplished within that time frame.

When properly catalyzed and applied, the G-1117 Clear Gel will cure to a clear, tough film that will enhance the beauty and durability of your cast part.

## MIXING

Prior to removal from the shipping container and catalyzation, it is recommended that the materials be mixed thoroughly to reincorporate any "settled" or "stratified" material. It is further recommended that the material in the shipping container be mixed at least once a week during its use period. This mixing procedure would assure the most uniform properties during application of the gel coat. Mechanical mixing is recommended and should be sufficient to "turn" the material 10 times. Most common gel coat mixing equipment will accomplish an adequate blend in less than 1/2 hour.

***DO NOT MIX MATERIAL CONTINUOUSLY!---As this may cause loss of thixotropic properties. If the gel coat is inadvertently over-mixed, hold material for 4 hours without agitation before application.***

It is suggested that the catalyst concentration used in the application of the "G" series NPG-ISO Clear Gel Coats not exceed 3.0% or fall below 1.5% to retain maximum properties. The recommended range for the catalyst concentration within the applied film is 1.8 to 2.2% at 77°F.

Under normal conditions, the gel coat is ready to "pour" in 45 to 60 minutes depending on the system that is used. The "time to pour" is dependent on the room temperature, humidity and air movement, as well as the catalyst concentration and the film thickness. A wet film thickness of at least 20 to 25 mils is recommended for optimum properties. These products should not be used when the temperature conditions, both mold and ambient, are below 65°F. as the curing may be adversely affected.

## SAFETY CONSIDERATIONS

"G" series NPG-ISO clear gel coats are based on a resin that contains styrene monomer, which is a flammable liquid. Keep away from sparks, heat and open flame (including pilot lights). Electrical equipment should be vapor-proof and protected from breakage.

Styrene vapors are heavier than air and will tend to concentrate in the low areas of molds and in pockets immediately above the floor area. To keep vapors within a safe limit in all areas, adequate ventilation or suction fans should be used that will remove these styrene monomer vapors.

**All equipment must be grounded - including spray guns and molds.**

Both the polyester gel coat and the catalyst may cause burns to eyes and skin. Do not get in the eyes! Avoid breathing vapors! Gel coat applicators should wear a NIOSH approved respirator effective for vapors, spray mist and dust. In case of accidental contact, remove the contaminated clothing and wash affected skin areas with soap and copious quantities of water. Contact a physician if persistent skin irritation occurs. For eyes, immediately flush with plenty of water for at least 15 minutes; call a physician immediately. Wash contaminated clothing before reusing.