

# Product Data



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## "MG" SERIES 100% NPG/ISOPHTHALIC MARINE GRADE GEL COAT

HK Research high molecular weight 100% NPG/Isophthalic, UV Stabilized, Gel Coats are unsurpassed in the FRP Industry for their superior properties.

HK Research gel coats are specially formulated, pigmented polyesters that are designed for use in marine and sanitary-ware applications, building panels, and other outdoor applications where the gel coat surface is continually exposed to all existing weather conditions. The UV-light stabilized, high molecular weight, 100% NPG/Isophthalic polyester vehicle used in these gel coats provides superb exterior durability to the finished FRP product. These gel coats are also distinguished by their excellent leveling and fast, even film cure rates.

HK Research gel coats are available in standard whites and pastel colors as well as translucent and masstone colors. Specific properties for each color will be published in separate, less generalized "Product Data Sheets". Typical properties of this family of high quality gel coats are as follows:

### TYPICAL PROPERTIES OF UNCATALYZED GEL COATS

	<u>MG SERIES White &amp; Pastel Colors</u>	<u>MG SERIES Translucent &amp; Deep Colors</u>
Weight/Gallon @ 77°F:	10.3 lbs.	9.5 lbs
Specific Gravity @ 77°F:	1.24 lbs	1.14 lbs
Viscosity, Brookfield @ 77°F, 6 rpm:	14,000 cps	14,000 cps
60 rpm :	2,300 cps	2,300 cps
Shelf Life @ 77°F:		
Uncatalyzed:	3 months minimum	3 months minimum
Catalyzed,2% MEKP*:	12-16 minutes	12-16 minutes

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\*RCI Superox 46-702 or Equivalent

## APPLICATION

HK Research Corporation's "MG" Series 100% NPG/Isophthalic based gel coats are formulated for standard conventional spray application, as well as "air-less" application. These high performance gel coats require careful application in order to maximize the properties in the cured gel coat film.

## 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 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 "MG" Series 100% NPG/Isophthalic based 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 laminate upon in 30 to 45 minutes. The "time to laminate" 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 18 to 20 mils is recommended for proper hiding, cure, and performance 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

"MG" Series 100% NPG/Isophthalic gel coats are based on a resin, which 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 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 using.