

Product Data



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FDA CERTIFIABLE GEL COATS

The HK Research laboratory has developed a line of gel coats that we can certify will meet the FDA Food Additive Requirements as outlined in The Food and Drug Code of Federal Regulations; Title 21 - Paragraphs 177.2420 (Polyester Resins, crosslinked) and 175.300 (Resinous and Polymeric Coatings).

These gel coats retain most of the outstanding properties of our regular "G" Series Gel Coats, which are widely used in the Cultured Marble Industry. The primary difference is that these "FDA Gel Coats" should be limited to interior applications because FDA regulations do not yet permit the use of the UV light stabilizers that we use in our "G" Series Gel Coats. This means that the "FDA Gel Coats" will exhibit some yellowing when placed in direct sunlight for any significant period of time. The chemical resistance, durability and ease of handling of these gel coats will be very similar to that of our "G" Series Gel Coats.

TYPICAL PROPERTIES OF UNCATALYZED GEL COAT

	<u>G-2509 WHITE</u>	<u>G-1260 CLEAR</u>
Viscosity, Brookfield, 77°F		
6 RPM	13000-16000 cps	6000-8000 cps
60 RPM	2200- 2800 cps	1200-1500 cps
Weight per Gallon	10.2 pounds	8.6 pounds
Specific Gravity	1.22	1.03
Gel Time, 77°F, 2% MEKP	8-10 minutes	8-10 minutes

G-2509/G-1260 are supplied at a viscosity ready to spray in conventional pressure-pot, airless or air-assisted airless spray equipment. No additional thinning is needed nor is it recommended. The gel coats should be stirred before using just like any other gel coat product. The "FDA Gel Coats" will spray essentially just like any of our "G" Series NPG/Isophthalic Gel Coats. Gel and cure information would be similar to that found in our "G" Series technical bulletin.

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The "FDA Gel Coats" are also available in a number of other colors; however, due to the strict FDA Regulations, each color combination will have to be assessed individually to make sure the pigments comply with the FDA requirements. The HK Research laboratories will be able to assist in this determination and we will make every effort to match colors submitted to us with acceptable pigment combinations.

APPLICATION

HK Research Corporation's "G" Series 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. The 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 "G" Series 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.

Specific information about handling and application techniques for use with HK Research's Gel Coats can be found in our technical bulletin HKR-015 titled "Description/Application HK Research Gel Coats".

SAFETY CONSIDERATIONS

"G" Series 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.