Product Data

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LIGHT STABILIZED CLEAR NPG-ISO GEL COATS FOR THE CULTURED MARBLE INDUSTRY

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 have exhibited 3000+ cycles in the CMI hydrothermal shock test (LS 2-76, ANSI Z124.3).

COLOR

The color of the 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:

L = -4.0 to -6.0
a = -0.5 to +0.5
b = -1.0 to +1.0

PROCESSING PROPERTIES

The handling characteristics of HK Research Clear NPG-Isophthalic gel coats are unmatched for their ease of application, quick leveling, air release, and rapid cure.

HK Research manufactures a series of Clear Cultured Marble Gel Coats that allow the use of this exceptional material under most conditions. To establish the correct material for your manufacturing equipment and conditions, please contact our representative or our technical service laboratories at 1-800-334-5975 or 828-328-1721.

HK RESEARCH NPG/ISO CLEAR GEL COATS
FOR THE CULTURED MARBLE INDUSTRY

TYPICAL PROPERTIES AT 25°C (77°F)

Product Number	Cup Gel Time @ 2% MEKP (1)	Viscosity (2), cps @ 6 rpm	@ 60 rpm
	***** VERY FAST CURE SYSTEMS *****		
G-1150	4 - 5	6,000- 8,000	1,000-1,500
G-1193	4 - 5	11,000-13,000	1,500-2,000
	***** FAST CURE SYSTEMS *****		
G-1160	4 - 5	8,000-10,000	1,200-1,800
G-1175	9 - 12	9,000-11,000	1,200-1,800
G-1183	4 - 5	11,000-13,000	1,500-2,000
G-1191	9 - 12	6,000- 8,000	1,000-1,500
	***** REGULAR CURE SYSTEMS *****		
G-1161	9 - 12	8,000-10,000	1,200-1,800
G-1172	11 - 14	9,000-12,000	1,400-2,000
G-1178	16 - 20	9,000-12,000	1,400-2,000
G-1184	9 - 12	11,000-13,000	1,500-2,000
	***** BRUSHING GEL COATS *****		
G-1007	9 - 12	2,000-4,000	600-1,000
G-1118	8 - 12	1,200-1,400	1,200-1,400

(1) RCI Superox 46-702 or equivalent. If other catalyst is to be used, please contact HK Research representative for recommendations.

(2) Brookfield Model LVF.

Additional products which meet specific end use requirements are available. Please contact your HK Research Corporation representative or our technical service laboratories for assistance.

APPLICATION

HK Research Corporation's "G" series NPG-ISO Clear Gel Coats are formulated for standard conventional spray application as well as "air-less" application. Most of the systems are suitable for use in standard "air-less equipment"or the currently available "low pressure-air assisted" airless type equipment. These high performance gel coats require careful application in order to maximize the properties in the cured gel coat film. Poor application of the "G" series NPG-ISO Clear Gel Coat systems will cause a reduction in the properties of 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 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^{o}F.

Under normal conditions, the gel coat is ready to "pour" in 30 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^{o}F. as the curing may be adversely affected.

SAFETY CONSIDERATIONS

"G" series NPG-ISO clear gel coats are based upon 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 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.