

Product Data



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R0213

RESILIENT, LIGHT STABILIZED VOID FREE POLYESTER CASTING RESIN

FEATURES

- ** MEDIUM VISCOSITY**
- ** PRODUCES VOID FREE CASTINGS WHEN PROPERLY COMPOUNDED **
- ** 100% ISOPHTHALIC RESIN SYSTEM FOR EXCELLENT
TOUGHNESS AND CHEMICAL RESISTANCE **
- ** OUTSTANDING STAIN RESISTANCE **
- ** HIGH HEAT DISTORTION TEMPERATURE **
- ** RESILIENT FOR THERMAL SHOCK RESISTANCE **
- ** EXCELLENT LIGHT TRANSMISSION PROPERTIES **
- ** SUPERIOR COLOR AND CLARITY **
- ** UV INHIBITED **

HK Research Corporation has developed a low-color, highly resilient isophthalic casting resin system specifically formulated to meet the needs of the cultured marble industry for a product that will produce a nearly void free onyx casting without the use of a vacuum. When a vacuum is used the R0213 resin system will produce an essentially void free casting.

R0213 casting resin is designed for use in the fabrication of flat stock, such as countertops, tabletops and vanities for use with drop-in bowls. The high reactivity, which gives this resin its toughness and chemical resistance, can cause stress cracking if it is cast in bowl molds. Some manufacturers have found that they can successfully cast bowls with this resin if they remove the "hat" very early in the cure cycle and demold the part shortly after it reaches peak exotherm. Both of these steps require extra precautions on the part of the molder.

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Vanity tops and countertops made with R0213-type resins and the densified ATH filler, such as R.J. Marshall's DF-40 have consistently passed the CMI stain resistance test without the presence of a gel coat.

R0213 resin will produce castings of excellent color when used with ATH filters such as R. J. Marshall's DF-40 at a filler concentration of 65 - 70% by weight.

R0213 is supplied at a monomer level and viscosity that would permit the addition of up to 5% by weight of additional monomer such as Methyl Methacrylate. This addition will reduce the viscosity to about 1000-1200 cps and will offer the molder the option of adding an acrylic modification to his system if so desired.

TYPICAL PROPERTIES OF LIQUID RESIN

Color	Pink to light purple
Viscosity, 77°F	1800 - 2200 cps
Weight per gallon	9.37 lbs.
Specific Gravity	1.13
Stability, uncatalyzed, 77°F:	3 months minimum

TYPICAL CURING PROPERTIES

Neat Resin:

Gel Time, 77°F, 1.75% HiPoint 90	18 - 22 minutes
Gel to Peak	11 - 15 minutes
Peak Exotherm, 100 gram mass	330 - 360°F

Filled Resin:

Filled resin tests have not been run on this resin using the 1.75% HiPoint 90 catalyst system specified. We expect to be running these tests in the near future. Meanwhile, we would anticipate, based on our experience with other catalyst systems, that the matrix gel @ 77°F will be about 25-30 minutes and the demold time would be approximately 60 minutes from the point of catalyzation.

R0212 Casting Resin is identical to the R0213 product described in this bulletin except that it is supplied as an unpromoted version of R0213. In order to obtain a reasonable gel and cure of this product it must be suitably promoted prior to catalyzation. If assistance is required in choosing the correct promoters we recommend contacting the HK Research Laboratories at 1-800-334-5975.

R0212 Unpromoted Resin can also be used to blend with the R0213 to lengthen the gel time of the R0213 if required.

SAFETY CONSIDERATIONS

HK Series Isophthalic Casting Systems 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 resin 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.