

# Product Data



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## R0284

### HIGH MOLECULAR WEIGHT NPG/ISOPHTHALIC CASTING RESIN

#### FEATURES

- \* 100% NPG/Isophthalic Resin System For Excellent \*  
Toughness and Chemical Resistance
  - \* Outstanding Stain Resistance \*
- \* Excellent Light Transmission Properties \*
  - \* Superior Color and Clarity \*
- \* High Heat Distortion Temperature \*
  - \* UV Light Stabilized \*

HK Research's R0284 Casting Resin is formulated from a high molecular weight, 100% NPG/Isophthalic resin system which imparts toughness, chemical resistance and a high heat distortion temperature to this product.

Fully cured castings of R0284 and R. J. Marshall's DF-74 ATH filler have been subjected to the CMI Stain Test (ANSI Z124.3.4.2) and have passed with a rating of less than 20 which is outstanding for a non gel-coated casting.

R0284 casting resin is designed for use in the fabrication of flat stock such as counter tops, 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 integral bowl molds. Some manufacturers have found that they can successfully cast integral bowls with this resin if they remove the "hat" very early in the cure cycle and demold the part shortly before it reaches peak exotherm. Both of these steps, however, require careful attention on the part of the molder.

Vanity tops and counter tops (flat stock) made with R0284 type resin and densified fillers such as R. J. Marshall's DF-40 and DF-74 have consistently passed the CMI (ANSI) stain resistance and chemical resistance tests without the presence of a gel coat. R0284 casting resin will produce castings with excellent color using ATH filler such as Marshall's DF-40 and DF-74 along with normal levels of color pigments.

R0284 Casting Resin does contain a UV Light-Stabilizer that is designed to retard yellowing in outdoor exposure.

### **TYPICAL PROPERTIES OF LIQUID RESIN**

Color	Blue
Viscosity, 77°F	1100-1300 cps
Weight Per Gallon	8.8 lbs.
Specific Gravity	1.06
Stability, Uncatalyzed, 77°F	3 months minimum

### **TYPICAL CURING PROPERTIES**

#### **Neat Resin:**

Gel Time, 77°F, 1% Superox 46-731*	20-25 minutes
Gel To Peak	6-10 minutes
Peak Exotherm, 100 gram mass	340-380°F

#### **Filled Resin:**

R0284	100 grams
DF-74 (R.J. Marshall)	200 grams
HWE-2303 White	3 grams (1.0% of total mix wt.)
Superox 46-731	1.0 grams

Gel Time, 77°F	30-40 minutes
Demold Time	30-40 minutes after gel

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\*Reichhold Chemicals

2,4 Pentanedione Peroxide catalysts such as Reichhold's Superox 46-731, Atochem's Lupersol 224 or Akzo's Trigonox 40 when used with this resin will exhibit outstanding room temperature cure characteristics without the need for a heated post-cure. Maximum hardness and stain resistance will be attained within a few hours after the cast component is demolded.

R0284 will also work with conventional Methyl Ethyl Ketone Peroxides but our tests have shown that the demold time and Barcol hardness development will be longer. Typical demold times with these catalysts would be 2-3 hours after catalyzation and a room temperature cure cycle of 24-48 hours will be required to obtain maximum hardness and stain resistance. A heated post-cure can be used to shorten this cure time if necessary. Please contact the HK Research Laboratories at 1-800-334-5975 for more information on post-curing, if required.

### **SAFETY CONSIDERATIONS**

HK Series NPG/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. Avoid contact with 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.

