

# Product Data



908 LENOIR ROAD • POST OFFICE BOX 1809  
HICKORY, NORTH CAROLINA • 28603-1809  
TELEPHONE (828) 328-1721  
TOLL FREE (800) 334-5975  
FAX (828) 328-4572

**R-0221**

## **RESILIENT, LIGHT STABILIZED ACRYLIC MODIFIED POLYESTER CASTING RESIN**

### **FEATURES**

- \*\* MEDIUM VISCOSITY \*\***
- \*\* ACRYLIC MODIFIED FOR IMPROVED DURABILITY \*\***
- \*\* 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 R0221 resin system will produce an essentially void free casting.

R0221 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.

R0221 has been further modified with a blend of styrene and acrylic monomers to improve durability of the finished part.

Vanity tops and countertops made with R0221 resin 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.

R0221 resin will produce castings of excellent color when used with ATH fillers such as R. J. Marshall's DF-40 at a filler concentration of 65 - 70% by weight.

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

Color	Pink to light amber
Viscosity, 77°F	1200 - 1500 cps
Weight per gallon	9.26 lbs.
Specific Gravity	1.11
Stability, uncatalyzed, 77°F:	3 months minimum

### **TYPICAL CURING PROPERTIES**

#### **Neat Resin:**

Gel Time, 77°F, 1.0% RCI 46-702	9 - 12 minutes
Gel to Peak	10 - 15 minutes
Peak Exotherm, 100 gram mass	340 - 360°F

#### **Filled Resin:**

R0221	35 parts by weight
DF-40	65 parts by weight

<u>%MEKP *</u>	<u>MATRIX GEL TIME (77°F)</u>	<u>TYPICAL DEMOLD TIME</u>
1.0	20 minutes	50 - 60 minutes
1.25	16 minutes	40 - 50 minutes
1.5	12 minutes	30 - 40 minutes

\* % MEKP Based upon total matrix weight

### **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.