Product Data

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REFLEX™ POLYMER SERIES

RFX-WHITE AND OFF-WHITE

Using a proprietary polymer grafting technique blended with styrene and MMA, HK Research has developed a **Grafted Polymer** that is truly "Revolutionary!" This grafted polymer has multiple reactive sites that allow superior cross-link density (high molecular weights = best weathering and water resistance) using shorter polymer chains (better in-shop application properties). AND this new grafted polymer has inherent flexibility. This yields a highly flexible, strong, user-friendly product. The resulting product, when properly applied, yields the following properties:

- **NPG/ISOPHTHALIC GRAFTED POLYMER BACKBONE**
- **LOW STYRENE (HAP) LEVEL - LESS THAN 29% - MEETS ALL CURRENT EPA MACT REGULATIONS**
- **FORMULATED INTO HIGH PERFORMANCE ULTRA-WHITE COLORS**
- **GOOD WATER AND BLISTER RESISTANCE**
- **HIGH STRENGTH AND HARDNESS & 5.5-6.5% ELONGATION IN TENSILE (i.e. NO MORE CRACKING!)**
- **EXCEPTIONALLY EASY PATCH & REPAIR PROPERTIES**
- **USER-FRIENDLY APPLICATION PROPERTIES**

TYPICAL PROPERTIES OF LIQUID RFX POLYMER

Total HAP Content:	29 %
Weight/Gallon @ 77°F:	11.4 pounds
Specific Gravity @ 77°F:	1.3-1.4
Viscosity, Brookfield	
@ 77°F @ 6 rpm:	16,000-20,000 cps
@ 60 rpm:	2,200-3,200 cps
Thixotropic Index:	5.5 – 7.0
Gel Time, 100 Grams	
@ 77°F, 2% MEKP:	10-14 minutes
Shelf Life - Uncatalyzed, @ 77°F:	3 months minimum

TYPICAL MECHANICAL PROPERTIES OF CURED RFX POLYMER

Tensile strength	10,000 psi
Tensile modulus	447,000 psi
% Tensile elongation	6.0%
Flexural strength	18,000 psi
Flexural modulus	532,000 psi

APPLICATION

HK Research Corporation's RFX™ Series Polymer products 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 polymers require careful application in order to maximize the properties in the cured polymer film. Poor application of the RFX™ series polymer systems will cause a reduction in the properties of the cured polymer 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 polymer. Mechanical mixing is recommended and should be sufficient to "turn" the material 10 times. Most common polymer 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 the polymer 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 RFX™ Series NPG-ISO Polymers 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.

Recommended catalysts are Hi-Point 90, Hi-Point 90 LP, Cadox L-50a, and DDM-9.
Call HK's Lab for other recommendations.

SAFETY CONSIDERATIONS

RFX™ Series NPG-ISO polymers are based on 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 polymer and the catalyst may cause burns to eyes and skin. Do not get in the eyes! Avoid breathing vapors! Polymer applicators should wear a NIOSH approved respirator effective for vapors, spray mist and dust. In case of accidental contact, remove the 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.