

MIR-970

Concrete Relining and Repair Resin

DESCRIPTION	<p>The MIR-970 structural resin system is specifically designed for concrete relining and rehabilitation where chemical resistance, hydrolytic stability and long term structural performance is required. The system can be applied rapidly with successive layers to restore concrete assets and be serviceable within 24 hours.</p>	
FEATURES AND BENEFITS	Micro-fiber technology	<ul style="list-style-type: none"> • Nanoparticles and microfibers chemically bond with the resin to improve the resins structural performance. • Glass flakes ensure excellent hydrolytic stability and chemical resistance. • Based on a high quality vinyl ester resin.
	HDT formulation	<ul style="list-style-type: none"> • Suitable for most exterior applications if painted or if UV additives are mixed with the resin topcoat.
	Application	<ul style="list-style-type: none"> • Surface must have some structural capacity (>3000 psi). Prepare concrete surfaces by water blasting - 3,000-4,000 psi to remove poorly consolidated material and other contaminants. It is essential that all layers are kept free from contaminants such as moisture, oils, dust etc. as they will affect the quality of the surface adhesion. • Use MIR-960 concrete primer if working with damp concrete surfaces. • Apply MIR-970 resins only when temperatures are between 68 - 86°F and when it is not raining. • Ensure material is stirred and not aerated. • Apply first layer of MIR-970 as soon as the primer is dry and let the first coat dry for 12 hours (important for old substrates as this stabilizes the bonded substrate). • The material can be brushed or sprayed on using industrial spray equipment up to 1/8 in a single layer. Successive layers can be applied after each layer has gelled (within 15-20 minutes). • Subsequent MIR-970 layers should be applied within 12 hours. • The material bonds tenaciously with itself. • All seams and edges should be tapered.
	Glass reinforcement	<ul style="list-style-type: none"> • The micro-fibers are not visible and do not print through to the surface. • Can be used with glass laminates (flex strength 41,000 psi) or without glass laminates (flex strength 20,000 psi).

TYPICAL LIQUID RESIN PROPERTIES	<u>Properties at 25°C</u>	<u>Method</u>	<u>Units</u>	<u>With Glass Laminate</u>	<u>Sprayed (No Laminate)</u>
	Density		ASTM D792	g/ml	1.6
Viscosity		ASTM D2196	cP	6,000	6,000
Thix Index		ASTM D2196	n/a	5.6	5.6
Glass Content		Formula	%	50	12.5
Styrene Content		Formula	%	45	45

PROCESSING GUIDELINES Gel Characteristics at 25°C based on standardized laboratory tests.

	<u>Working Time</u>	<u>Gel Time</u>
2.0% MEKP, 100 g mass	15 min	15 min

- This resin system is designed for use with high quality MEKP peroxides. Use only in the range of 1.3 to 2.5 percent.
- This product has been optimally formulated. Do not add promoters, fillers, or other additives. If you feel that your application requires some adjustment, please contact our technical service team first.
- Ideal application temperature: 77 - 86°F. Insufficient cure and poor strength development may occur at low or high temperatures. Do not use below 68°C

TYPICAL CURED RESIN PROPERTIES	<u>Physical Properties</u>	<u>Method</u>	<u>Units</u>	<u>With Glass Laminate</u>	<u>Sprayed (No Laminate)</u>
	Barcol Hardness, Ultimate (GYZJ-935 scale)		ASTM D2583	n/a	81
Flexural Strength		ASTM D790	psi	41,000	20,000
Flexural Modulus		ASTM D790	Mpsi	2.0	0.87
Flexural Elongation @ Break		ASTM D790	%	4.5	4.5
Tensile Strength		ASTM D638	psi	22,000	9,700
Tensile Modulus		ASTM D638	Mpsi	2.0	0.90
<u>Thermal Properties</u>					
HDT, 264 psi		ASTM D648	°F	221	221
<u>Tack Free Time</u>				2 hours	
<u>Cure schedule @20°C</u>					
	4 hour		Barcol	55	
	8 hour		Barcol	65	
	12 hour		Barcol	80	
	7 days		Barcol	81	

- Properties are typical values in standardized laboratory conditions.
- It is the responsibility of the end user to ensure that properties actually achieved are suitable for the intended use.
- Properties may vary depending upon the degree of cure.

ADDITIVES	UV additives required for exterior topcoats. Receptive to most pigments. Please request any additive selections at the time of placing your order.
SAFETY	For industrial use only. Not for household use. Do not use this product unless you have read and understand the MSDS. This product is flammable. Keep away from sparks and sources of heat. Ground and bond all containers.
STORAGE	To ensure maximum stability and to retain optimum resin properties, resins should be stored between 68-77°F. Store in the original closed container. Keep closed when not in use. Store away from sources of heat. Storage areas should conform to local fire and building codes. Rotate stock on a first in, first out basis.
STANDARD PACKAGING	55 gallon open top drum 5 gallon pail
COMMERCIAL WARRANTY	Shelf life is three months from the date of shipment, when stored in accordance with the storage conditions above. Extended storage or storage outside of recommended conditions may cause drift in viscosity and gel times.
NOTICE	Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for their self the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results obtained by using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.