

SOUTH SHORE CONSTRUCTORS, LTD.
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QUANTUM[®]



POLYMORPHIC RESIN

Giant Molecule High Technology
Corrosion and Abrasion Protective Coating Systems

**U.S.D.A. & AGRICULTURE CANADA ACCEPTED
E.P.A. APPROVED**

**OUTSTANDING RESISTANCES include: CHEMICAL CORROSION / ABRASION / FREEZ-
THAW / THERMAL SHOCK / WEATHERING (UV).**

**OUTSTANDING STRENGTHS include: COMPRESSIVE / TENSILE / FLEXURAL / HARDNESS
/ BONDING.**

**OUTSTANDING PERFORMANCE includes: RAPID CURE — RAPID RETURN to SERVICE /
100% SOLIDS / EASE of APPLICATION from 40° below ZERO F. and up / WATERPROOF
/ VAPOR BARRIER / NON-CHALKING.**

**FLOORS — WALLS — TANKS — PIPES — SUPPORTS — RUNWAYS — DOCKS — BRIDGE DECKS — SILOS —
PARKING GARAGES — TRAFFIC MARKINGS — SWIMMING POOLS — MARINE METALS — TRANSFER CHUTES.**

Quantum polymorphic resin is specifically formulated to avoid the inherent problems and deficiencies experienced with common coating materials, as the charts below display:

COMPARISON of TYPICAL PHYSICAL PROPERTIES: Concrete and Polymer Coatings.

	Concrete**	Poly-morphic Resin	Poly-ester**	Poly-amide Epoxy**	Amine Epoxy**	Ure-thane**	Furan**
Min. Application Temp. °F	40	Minus 40	40	60	60	60	45
Traffic Limitations – Light Return to Full Service	28 days	10 minutes to a few hours	16 hrs.	24 hrs.	24 hrs.	24 hrs.	24 hrs.
Tensile Strength PSI	300	10,000	2,000	4,000	2,000	1,000	3,000
Compressive Strength PSI	3,500	20,000	10,000	4,000	6,000	5,000	14,000
Flexural Strength PSI	–	17,000	1,500	1,000	1,500	1,500	6,000
Coeff. of Expansion In/In/F°	6.5x10 ⁻⁶	6.4x10⁻⁶	20x10 ⁻⁶	40x10 ⁻⁶	40x10 ⁻⁶	–	–
Shrinkage %	–	Zero, linear	3	0.5	0.5	2	0.21
Adhesion Characteristics	–	Excellent	Poor	Good	Good	Good	Good
Abrasion Resistance	–	Excellent	Good	Good	Good	Good	Good
Resistance to Thermal Shock	–	Excellent	Poor	Poor	Poor	Poor	Poor

COMPARISON of CHEMICAL CORROSION RESISTANCE: Polymer Coatings.

	Poly-morphic Resin***	Coal-tar Epoxy**	Amine Epoxy**	Epoxy Ester**	Poly-ester**	Poly-vinyl**	Ure-thane**	Chlorinated Rubber**
ACIDS:								
Sulfuric 10%	R*	LR	R	LR	R	R	LR	R
Sulphuric 70%	R	NR	NR	NR	R	NR	NR	R
Hydrochloric 10%	R*	LR	R	LR	R	LR	LR	R
Hydrochloric 35%	R	NR	NR	NR	R	LR	LR	R
Nitric 10%	R*	NR	LR	NR	R	R	LR	R
Nitric 50%	R	NR	NR	NR	NR	NR	NR	NR
Acetic 50%	R*	NR	NR	NR	NR	NR	NR	NR
WATER:								
Distilled	R*	R	R	R	R	R	LR	R
Salt Water	R*	R	R	R	R	R	LR	R
ALKALIES:								
Sodium Hydroxide 5%	R	R	R	LR	R	R	LR	R
Ammonium Hydroxide 10%	R	R	LR	LR	R	R	LR	R
GASES:								
Chlorine	R*	LR	LR	LR	R	LR	LR	R
Ammonia	R	–	–	–	–	–	–	–
Hydrogen Sulfide	R*	R	R	LR	R	LR	R	R
ORGANICS:								
Alcohols	R	LR	R	LR	R	NR	NR	LR
Aliphatic Hydrocarbons	R	LR	R	R	R	R	R	LR
Aromatic Hydrocarbons	R	LR	LR	LR	R	NR	R	NR
Ketones	LR	LR	LR	NR	NR	NR	NR	NR
Esters	R*	NR	LR	NR	LR	NR	NR	NR

*Tested to at least 150°F

**The above charts are reprinted from "Corrosion Engineer Reference Book" with the permission of the National Association of Corrosion Engineers, Houston, Texas, U.S.A. 1983

***See Quantum "Chemical Corrosion Resistance Guide" for specific recommendations.

R – Recommended, LR – Limited Recommendation, NR – Not Recommended

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Manufacturing Facilities in U.S.A., Canada, Europe and South America.

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