



Data Sheet



ISO 9001:2008
FM62236

Part A – SolarMax® 21-50 Iso – Part # 60350

Part B – SolarMax® 21-50 Resin – Part # 60360

DESCRIPTION:

SolarMax® is a two-component, 100% solids (no VOCs, no solvents), exothermic, rapid curing, elastomeric polyurethane lining system. SolarMax® is based on aliphatic chemistry which has excellent color and gloss stability. This product combines the durability of a tough elastomer with the color and gloss stability of a urethane topcoat into one product.

FEATURES & BENEFITS:

- Lining thickness varies based on application, ranging from 40 mils (1 mm) to 100 mils (2.5 mm).
Truck bed floor minimum: 80 mils (2 mm)
- High tensile strength and tear strength properties
- Very good abrasion and impact resistance
- Good chemical resistance

CHEMICAL PROPERTIES*:

	Isocyanate	Resin	Test
Specific Gravity (grams/cc)	1.07	1.07	ASTM D-792
Viscosity, CPS	1300 – 1700	800 – 1200	
Weight per Gallon	8.9	8.9	
Mix Ratio, Parts per Volume	1	2	
Mix Ratio, Parts per Weight	53	100	
Gel Time, Seconds	22 – 25		
Solids by Volume/Weight	100%	100%	
Volatile Organic Compounds	0 lbs/gal	0 lbs/gal	
Shelf Life - Unopened Containers	6 months	6 months	
Base Color	clear	light amber	

*Properties were tested at 77°F (25°C).

TYPICAL PHYSICAL PROPERTIES:

	Result	Test
Hardness (Shore D)	50±5	ASTM D-2240
Tensile Strength (psi)**	1300 – 1700	ASTM D-412
Elongation (%)**	140 – 200	ASTM D-412
Compressive Strength (psi)	800	ASTM D-695-96
Taber Abrasion Resistance (mg of loss/1000 cycles) CS17 Wheel; 1000 grams weight	25 – 30	ASTM D-4060
Tear Resistance (pli)** Die C	170 – 230	ASTM D-624
Ross Flex (% crack growth per 50,000 cycles)	0	ASTM FIA-308
Coefficient of Friction on Steel		
Static	.6	ASTM D-1894-95
Kinetic	.5	ASTM D-1894-95
Water Absorption (%)	≤1.6	ASTM D-570
Dielectric Strength (volts/mil)	300	ASTM D-149
Volume Resistancy (ohm/inches)	6 X 10 (12)	ASTM D-257
Dielectric Constant (MHz)	5.4	ASTM D-150
Dissipation Factor (MHz)	0.058 A	ASTM D-150
Cathodic Disbonding	Pass	ASTM G-8

**Properties were checked of SolarMax® polyurethane lining, 80 mils (2 mm) thick stock.

DRY FILM THICKNESS RANGE:

Varies based on application, typically minimum of 40 mils (1 mm) up to 100 mils (2.5 mm)

PROCESSING CHARACTERISTICS OF SOLARMAX® 21-50:

Equipment Used	RhinoPro™ HP-21 Classic or RhinoPro HP-21 Max
Spray Gun	Fusion - Air Purge, AR 2232 Round Spray Tip
Process Temperatures, °F	
Iso Component	140° – 150°F
Resin Component	150° – 160°F
Hoses	140° – 150°F (Hose heat cannot drop below the lowest set temperature)
Process Pressure, psi (static)	2000 – 2500
Gel Time, sec	22 – 25
Tack Free, sec	45 – 55

APPLICATIONS:

- Paint replacement
- Color stable applications
- Excellent protective lining for applications requiring color stability and durability such as:
 - Floor and wall protection in industries such as food processing, food storage, veterinary, production area and laboratories
 - Marine applications such as boat decks
 - Walkways, stairwells and decks
- Spray-on application creates a monolithic, seamless lining which conforms to any shape and size.
- Elastomeric properties allow for application to surfaces subject to: vibration, expansion, contraction, movement, flexing, abrasion, and impact.
- Bonds to virtually all substrates of any dimension, including metals, woods, concrete and fiberglass
- Reduces noise from vibration and impact
- Stable from -40° F (-40° C) to 175° F (79.4° C)

NOT RECOMMENDED FOR:

- Sustained temperatures below -40° F (-40° C) or above 175° F (79.4° C)
- Application to high density polyethylene or thermo plastics

CHEMICAL RESISTANCE:

Good resistance to many commercial and industrial chemicals such as acids, alkalies, oils and cleaning chemicals. For specific applications and information, please consult our chemical resistance chart available on our website or speak to a Rhino Linings® representative.

SUBSTRATES:

Metals, wood, concrete, fiberglass, and geotextiles

COLOR OPTIONS:

Selected colors available by special order with the exclusion of special effect pigments such as metallics and pearlescents. Color range includes pastels to deep shade colors based on pigment availability. Please contact Rhino Linings Corporation for a color evaluation.

SAFETY PRECAUTIONS:

Health Considerations: Consult the Rhino Linings® Material Safety Data Sheets.

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product MSDS and Safety Manual for detailed information and handling guidelines.

For Your Protection:

The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors. Because of numerous factors affecting results, **Rhino Linings Corporation makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Corporation hereby disclaims any and all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Rhino Linings Corporation for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.

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