

Part A – HardLine® 21-55 Iso – Part # 60126

Part B – HardLine® 21-55 Resin – Part # 60146

DESCRIPTION: HardLine® is a 2:1 ratio, two-component, 100% solids, no VOCs (no solvents), exothermic, rapid curing, elastomeric polyurethane lining system. Lining thickness varies based on application, typically minimum of 1/16" (62.5 mils; 1.6 mm) up to unlimited thickness.

TYPICAL USES:

- Excellent general purpose industrial lining for applications such as:
 - Material delivery systems where a seamless flexible system is essential
 - Floor and wall protection in industries such as food processing, food storage, veterinary, production area and laboratories
 - Secondary containment-as a monolithic, impermeable lining for industrial plant, agriculture, and petrochemical applications
- 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
- Can withstand vehicle forklift traffic and heavy loads with proper thickness build
- Reduces noise from vibration and impact
- Stable from -40° F to 175° F (-40° to 79.4° C)

FEATURES & BENEFITS:

- High tensile strength and tear strength properties
- Excellent impact and corrosion resistance
- Very good chemical resistance
- Good abrasion resistance
- Reduces noise from vibration and impact

CHEMICAL PROPERTIES:	Standard Test	Isocyanate (A)	Resin (B)
Specific Gravity (grams/cc)	ASTM D-792	1.23	1.03
Viscosity, CPS at 77°F (25°C)		300 – 400	500 – 700
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0 lbs/gal	0 lbs/gal
Mix Ratio, Parts per Volume		1	2
Mix Ratio, Parts per Weight		60	100
Gel Time, Seconds at 77°F (25°C)		12 – 15	
Tack Free, Seconds at 77°F (25°C)		15 – 25	
Theoretical Coverage (dft)		1600 sqft/gal at 1 mil thick	
Shelf Life - Unopened Containers		12 months	12 months
Base Color		amber/dark brown	opaque

TYPICAL PHYSICAL PROPERTIES:	Test	Result
Hardness (Shore D)	ASTM D-2240	55±5
Tensile Strength (psi)*	ASTM D-412	2100 – 2200
Elongation (%)*	ASTM D-412	50 – 80
Flexural Modulus (psi)	ASTM D-790	2400 – 2800
Taber Abrasion Resistance (mg of loss/1000 cycles) CS17 Wheel; 1000 grams weight	ASTM D-4060	25 – 30
Tear Resistance (pli)* Die C	ASTM D-624	200 – 250
Water Absorption (%) - 24 hours	ASTM D-570	≤1.6%
Dielectric Strength (volts/mil)	ASTM D-149	300
Volume Resistancy (ohm/inches)	ASTM D-257	6 X 10 (12)

HARDLINE® 21-55**TYPICAL PHYSICAL PROPERTIES** (continued):

	Test	Result
Dielectric Constant (MHz)	ASTM D-150	5.4
Dissipation Factor (MHz)	ASTM D-150	0.058
Cathodic Disbonding	ASTM G-8	Pass

*Properties were checked of HardLine lining, 1/8" (125 mils), (3.18 mm) thick stock.

PROCESSING CHARACTERISTICS:

Equipment	Process Pressure	Spray Gun	Mix Module
RhinoPro HP-21 Classic; Max	2000 – 2500 psi	Fusion - Air Purge or Mechanical Purge	AR 2232

Process Temperatures

Iso (A) Temperature	Resin (B) Temperature	Hoses - High Pressure
140° – 150°F (60° – 66°C)*	150° – 160°F (66° – 71°C)*	140° – 150°F (60° – 66°C)*

*Hose heat cannot drop below the lowest set temperature.

DRY FILM THICKNESS RANGE: Varies based on application, typically minimum of 1/16" (62.5 mils; 1.6 mm) up to unlimited thickness.

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: Standard colors - black. Custom dark colors are available by special order

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS 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.

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