Oak Ridge™
Foam & Coating Systems, Inc.

OR93SLM

Description
OR93SLM is highly reactive two components polyurethane-urea hybrid based, solvent free membrane with excellent mechanical characteristics. The system exhibits combined excellent tensile strength, high elongation values, and good wear and tear propagation resistance. The membrane also provides lasting crack bridging properties.

Applied using specialist spray equipment, OR93SLM will begin curing in seconds allowing vertical applications and rapid build up to the desired thickness. OR93SLM retains a high degree of elasticity even at low temperatures.

Typical Component Properties

	Units	OR93SLM Part A Isocyanate	OR93SLM Part B Polyol	Test Method
Color		Yellow	Yellow	Visual
Viscosity	cPs	500-800 (at 75°F) (24°C)	400-800 (at 75°F) (24°C)	Brookfield
Specific Gravity	g/cc	1.14	1.04	

These are typical values and should not be construed as specifications.

Surface Preparation
All surfaces should be prepared using standard industry practices. If there are any doubts about suitability, a small trial area should be applied.

Mixing Instructions
OR93SLM is designed for use through specialist two component spray equipment. Our Technical Service Department can advise on choice of equipment and optimum processing conditions.

Both components should be raised to the processing temperature and agitated well before use to ensure an even color.

Application Details
Surface should be primed, if needed, with the correct primer. OR93SLM is then applied evenly through the correct processing equipment using a sweeping action ensuring a consistent even application is achieved. Over-coating of the membrane can take place after approximately 2 hours of application and up to a maximum of 48 hours.

If applying OR93SLM on to OR93SLM, and the first coat has been allowed to cure for more than 24 hours, then cleaning and re-priming is recommended to ensure adequate adhesion is achieved for the subsequent coat. OR93SLM may be applied down to a temperature of 32°F proving the temperature is rising and at least 6°F above dew point. The membrane will accept light traffic after 2 hours.

Recommended Process Conditions

The Polyol component must be mixed until homogeneous before use. The material is processed a two-component high pressure dosing machine using impingement mixing technology at a feed rate of 0.5 to 2 gallons/minute through a round nozzle.

	Units	Limits
OR93SLM Part B Polyol	Vol	1
OR93SLM Part A Isocyanate	Vol	1
Solids Content	%	100
Typical Component Temperature (both components, tanks and hose the same.)	°C (°F)	55-75 (130-170)
Typical Component Pressures	Psi	1800-2500
Theoretical Coverage	Ft^2	4100 ft^2/950lb kit @ 40 mils, 2050ft^2/950lb kit @ 80 mils

These are typical values and should not be construed as specifications.

Typical Reaction Characteristics

	Units	Result
Gel Time	Seconds	6-8
Tack free time	Seconds	10-12
Final hardness	Hours	2

Values refer to test made with a two-component, high-pressure machine run according to the recommended process conditions above. These are typical values and should not be construed as specifications.

Handling and Storage

	Units	OR93SLM Part B Polyol	OR93SLM Part A Isocyanate
Storage temperature	°F (°C)	59-77 (15-25)	59-77 (15-25)
Storage stability/Shelf life	Months	6	6

Stored in the original sealed drums in a dry place at the recommended temperature.

Typical Polymer Properties

	Units	Limits	Test Method
Hardness	Shore D	50	ASTM D2240
Density	g/cc	1.01	DIN 53479
Percent Solids	%	100 (0 g/l VOCs)	
Tensile	Psi	2105	ASTM D412
Elongation	%	140	ASTM D412
Tear	Pli	340	ASTM D624C
Taber Abrasion	Mg/rev. loss	95/100	ASTM D3389

These are typical values and should not be construed as specifications.

Chemical Resistance Evaluation

Method: ASTM D543 **Test Result**

Complete immersion at room temperature for 24 hr

HCl 15%	Pass	Toluene	Pass
H2SO4 30%	Pass	Mineral Oil	Pass
NaOH 50%	Pass	Benzene	Pass
Demineralized water	Pass	Ethanol	Pass
NaCl solution/Salt brine (27-30%)	Pass	Methanol	Pass
Acetone	Pass	Diesel fuel	Pass
Methylethylketone	Pass	Crude Oil	Pass

Product Stewardship
Oak Ridge Foam & Coating Systems, Inc. and its subsidiaries has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Oak Ridge Foam & Coating Systems, Inc. products ─ from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Safety Considerations
Safety Data Sheets (SDS) are available from Oak Ridge Foam & Coating Systems, Inc. SDS are provided to help customers satisfy their own handling, safety and disposal needs and those that may be required by locally applicable health and safety regulations. SDS are updated regularly, therefore, please request and review the most current SDS before handling or using any product. These are available from the nearest Oak Ridge Foam & Coating Systems, Inc. sales office.

Customer Notice
Oak Ridge Foam & Coating Systems, Inc. strongly encourages its customers to review both their manufacturing processes and their applications of Oak Ridge Foam & Coating Systems, Inc. products from the standpoint of human health and environmental quality to ensure that Oak Ridge Foam & Coating Systems, Inc. products are not used in ways for which they are not intended or tested, Oak Ridge Foam & Coating Systems, Inc. personnel are available to answer your questions and to provide reasonable technical support. Oak Ridge Foam & Coating Systems, Inc. product literature, including safety data sheets, should be consulted prior to use of Oak Ridge Foam & Coating Systems, Inc. products. Current safety data sheets are available from Oak Ridge Foam & Coating Systems, Inc. *2/17*