1. PREPARATION OF CURRENT BEDLINER

SANDING/SCUFFING

Make sure that any exposed metal is properly sanded. This can be achieved by several methods. We have found that a sanding brush or nylon cup brush works best and fastest for most areas. Use a high-speed nylon cup brush (available from Industrial Polymers, Inc.) or use #80 grit sandpaper or rougher. Do not sand to bare metal. You can also use a braided wire brush on a hand held grinder. For taped edges and tight areas you will find sanding by hand is best. It is not necessary to remove the painted surface entirely, but you want to make sure the surface is rough enough to enhance adhesion.

Any bedliner previously installed needs to be scuffed up to a swede-like finish.

Important: Make sure bed is thoroughly scuffed to ensure a solid and lasting bond.

WIPEDOWN/CLEANING

After sanding the surface and blowing it out with an air tool, you must wipe down the metal and old urethane bedliner with Methyl Ethyl Ketone (M.E.K.) THROROUGHLY. This serves a dual purpose of cleaning the surface by removing any dust, grease, chemicals, acids or wax; and the M.E.K. will soften the remaining paint to strengthen the bond of **SL-1000™.** It is important to use clean cloth rags (free from any oil or grease) when wiping the truck beds down so that there is no chance of contamination.

Important: We recommend using M.E.K. over all other prep solvents to wipe down the bed because of its strength and ability to create the strongest bond possible. Always use chemical resistant gloves and a respirator when using M.E.K.

2. PRIMER/ADHESION PROMOTER

MIXING PRIMER 450

When mixing the primer, it is imperative that the A-side and B-side be mixed in equal volume. A mixing ratio of 1:1 is the only way the primer will function properly. You may tint the B-side primer slightly by using a few drops of black pigment to help as a visual reference on light colored surfaces. The approximate amount of primer needed for a full truck bed is 450 to 500 ml.

Important: If the primer is mixed off-ratio, SL-1000™ will not properly bond.

APPLYING PRIMER

Primer 450 can be applied with a cup gun, high volume/low pressure (HVLP) gun or by hand with a paintbrush. It is important not to "puddle" the primer but to only coat evenly. If Primer 450 runs or sags, smooth out with your finger and let that area dry longer before coat **SL-1000™**. You can begin applying **SL-1000™** after 1 hour if temperature is above 70˚F. You must wait longer under cooler temperatures. When all of the tackiness of the primer is gone, it is ready to be sprayed with **SL-1000™**. Do not wait more than 4 hours. After 4 hours you must apply another coat of primer.

Important: It is important that you get an even coat throughout the surface to be coated. Primer 450 is not UV stable and will yellow if exposed to the sun, so be sure to cover all primer with SL-1000™

3. MIXING OF SL-1000™

KEVLAR® INTO A-SIDE

Mix the Kevlar® into the A-side of **SL-1000™** until it is completely mixed into the urethane. It should have a smooth consistency without lumps. You should have a drill with a minimum of 2,500 rpm when mixing Kevlar®, otherwise you will not mix properly and lumps will appear while you are spraying. If you have trouble with lumps, a faster drill should solve the problem. While mixing, keep blades of jiffy mixer clean and submerged in the material. For best results, use only 1 bag of Kevlar® per gallon of **SL-1000™**.

3. MIXING OF SL-1000™ (Cont.)

COLOR PIGMENT INTO B-SIDE

It is best to use colors provided by Industrial Polymers, Inc, as they have excellent color retention and long-term stability. Color stability issues sometimes arise with custom colors not supplied by Industrial Polymers, Inc., specifically light colors (like grey). NEVER use SL-1000™ with pure metallic silver pigment as an unwanted color change most often happens.

Add color into B-side and shake for approximately 10 seconds. Use one tube of SL pigment (4 oz.) per mixed gallon of **SL-1000™**. Only put colorant in B-side when you are ready to mix a gallon.

For custom colors, PPG colorants are usually best. Use single stage basecoats only, with no additives such as balancers, binders or clear coats. ****NEVER USE BASE PIGMENTS WITH SL-1000™****

Important: Do not use more than 1 SL color tube (4 oz. of color) or this will cause the urethane to have a creamy effect and will affect the cure process of the bed liner.

Remember: Do not apply colors that are lighter than our stock samples unless you use our top coat system.

MIXING SL-1000™

After mixing the color into the B-side, pour the B-side into the A-side can. Mix the material using a drill and jiffy mixer. When using the Kevlar® additive, mix the gallon of material for 1-1/2 to 2 minutes. When not using the Kevlar®, you should mix the material for 45 to 60 seconds. Once mixed, you will have approximately 15-20 minutes to spray the gallon. **Important: DO NOT OVERMIX! This will cause the material to be very liquid and make it difficult to spray on a vertical surface without runs or sags. If the material becomes too thick in the can or hopper, you need to mix longer. Take a stir stick and agitate until it becomes more fluid.**

4. SL-1000™ APPLICATION PROCESS

USING THE HOPPER GUN

The hopper fits directly onto the pistol with the handle forward, thereby allowing you to spray downward without worrying about spillage. **Do not use the rubber neck attachment**. The knob at the back of the pistol allows you to control product flow by regulating the trigger. At the butt end of the gun there is an elbow joint and an air control valve. These attachments keep the air hose behind and out of the way of the applicator and regulate airflow, respectively.

Three spray tips come with the gun. **For most applications you will use the medium tip (6mm).** A variety of textures can be achieved with the medium tip. Additionally, the product flows quickly whereby a thick, high-build pass can be applied quickly and efficiently. The medium tip is recommended when spraying **SL-1000™** with Kevlar®. Use this tip to apply thick coats to truck beds, trailers and any other job where you need a high-build rubber coating.

The small tip (4mm) should be used when you need a smoother finish or when you are trying to achieve a thinner coat. This tip restricts the product flow and allows you to cover more surface area at a thinner mil thickness. Re-coating other liners and applying vehicle rocker panels are two common application for small tip.

Note: It will take you longer to spray with the 4mm tip- 10 minutes per gallon with the 4mm tip vs. 5 minutes per gallon with the 6mm tip.

The large tip (8mm) is only recommended when spraying **SL-1000™** with non-skid fillers such as aluminum oxide grit, rubber crumb or sand. However, be very careful not to spray too heavy with this tip. The product will flow very, very fast. Go easy with the trigger to restrict the flow.

Remember, when the valve is open – the airflow is constant. The trigger only releases the product. Control product flow with size of the tip and volume control knob at the back of the pistol. Higher air pressure, smaller tip, and less trigger, means more atomization and smoother texture. Spray with an air pressure of 90 to 100 psi at the gun. To attain a rough texture (all else being equal), allow more product flow with less airflow. To attain a smoother texture (all else being equal), allow less product flow and more airflow.

4. SL-1000™ APPLICATION PROCESS (Cont.)

SPRAYING SL-1000™

To properly assemble the gun, remove one of the two brackets from the rubber boot and attach hopper directly to gun. Attach the hopper with handle facing forward. It is very important to tighten the bracket so the hopper does not separate from the gun.

The initial coat should be sprayed wet and smooth. Set your air pressure at 90-100 psi at the gun. When spraying with Kevlar® a little more pressure is needed. Set pressure at 100 – 110 psi.

For a new liner; on 8-foot long bed trucks, 2 gallons should be used on the front and sidewalls. Spray 3 gallons on floor and tailgate and on a 6-foot short bed truck, 1-1/2 gallons should be used on the front and side walls and 2-1/2 gallons should be used on the floor and tailgate. Remember on each truck to reserve 1/3 to ½ of the last gallon for texturing.

When doing a repair job, you will usually need between 2-3 gallons of SL-1000™ for 8 foot truck beds and 1-2 gallons for 6 foot truck beds.

Remove your masking materials as soon as you have finished spraying. Any unwanted overspray can be cleaned with isopropyl alcohol, if tended to right away. The more time overspray has to cure, the more difficult it is to remove.
Important: Initial coat must be a wet coat. Spraying too far away on your initial coat may result in pinholes. This will allow moisture onto the metal and could cause rusting and delamination.

CURING OF SL-1000™

SL-1000™ becomes dry to the touch in about 2 hours. **SL-1000™** will be capable of light use after 24 hours. Full cure takes 3 to 5 days. If the liner is exposed to cold weather (32˚F or lower), it may take 7 to 10 days for a full cure, depending on temperature.

For the first 6 hours the truck needs to be in an environment of 70˚F or greater. If the SL-1000™ is exposed to cold temperatures too soon it may cause hairline cracking. The truck must also be kept out of the rain for the first 4 hours, to avoid blistering. Warmer temperatures will speed up the curing process. Colder temperatures slow the process down. Do not use extreme heat (over 110˚F) to cure the liner.

For truck beds, the tailgate needs to remain down for the first 24 hours after being sprayed.

5. TOP COAT

TOP COAT

Topcoat #6 from Industrial Polymers can further enhance **SL-1000™**'s capabilities. It provides three principle benefits.

First, they increase chemical resistance. If **SL-1000™** will be exposed to strong chemical and/or solvents, Topcoat #6 will enhance its performance. Second, Topcoat #6 enhances gloss. If a **SL-1000™** job requires a super glossy finish, you can use Topcoat #6 to add shine. Finally, the Topcoat has excellent color retention and is perfect for attaining colors that are difficult for **SL-1000™**. Light colors, such as white and silver, can be sprayed if Topcoat over **SL-1000™** is used. Also, automotive colors containing large amounts of pearl and/or metallic flake can be added to Topcoat to reach a beautiful color match for tricky colors.

Mix a ratio of 1:1 by volume. Topcoat can be thinned with Toluene up to 20%. For best results, mix 1 SL color tube (4 oz. of color) to 1 pint of B-side and mix thoroughly. And 1 pint of A-side to B-side with added color (total mix will equal 1 quart) and mix with stir stick. **ALWAYS ADD PIGMENT TO TOPCOAT**

Topcoat is easy to apply using a HVLP paint gun, brush, or roller. When applying Topcoat to fresh **SL-1000™,** let **SL-1000™** cure for at least 6 hours but no more than 24 hours. Then apply the Topcoat – no primer is needed. Older coatings should be lightly sanded, wiped down with M.E.K., and primed with Primer 450.

NOTE: See Topcoat Tech Data Sheets for more details. Remember to always apply color when using Topcoat #6. Do not spray clear.

6. TECHNICAL

STORAGE

The **SL-1000™** containers should be kept sealed and stored in a cool, dry area protected from the direct sunlight and moisture. Storage temperatures should not exceed 80˚F or cold temperatures below 60˚F. The shelf life of factory sealed containers stored under these conditions is 6 months to one year.

The resin portion (A-side) will crystalize when exposed to temperatures below 40˚F and the curative portion (B-side) may crystalize when exposed to temperatures below 20˚F. This does not harm the component; however, the resin components should be warmed to 90˚F - 100˚F, the curative component to room temperature and each component mixed well before using. The components should not be overheated and should be cooled to room temperature before mixing together. After long-term storage, it is a good idea to stir each component before adding them together.

SL-1000™ components are shipped from the factory in sealed containers purged with dry nitrogen. Containers that have been opened should be resealed immediately after the material has been removed in order to prevent moisture contamination and solvent evaporation. Resin component containers must be purged with dry nitrogen if the contents are not used within 24 hours.

SAFETY

Vapors from the **SL-1000™** contain isocyanates and solvents. Forced air ventilation must be used for all indoor applications. When working in tanks and other closed vessels or downstream from spray gun, fresh air breathing equipment should be worn. Chemical cartridge masks suitable for organic vapors may be used under conditions with adequate ventilation. Protective clothing should be worn at all times. Both resin and curative components contain flammable solvents and should be protected from sparks and open flames.

7. SL-1000™ HIGH PROFILE NON-SKID **OPTION**

SL-1000™ can be made into a greatly enhanced non-skid, high profile coating for walk and work areas by simply adding sand, aluminum oxide grit or rubber crumb.

1. Pour all of component A into a plastic 2 to 5 gallon pail.
2. Add one quart of #3 sandblasting sand or one quart of #16 aluminum oxide grit, or rubber crumb. Use sandblasting quality sand as it is absolutely dry. To measure, use a glass measuring cup.
3. Mix for 1 minute with jiffy mixer.
4. Keep stirring and add component B with color to this mixture until it gels – approximately another 30 – 45 seconds.
5. Once material has gelled, stop stirring. The grit will remain evenly suspended in the material.
6. Using the 6 mm or 8 mm tip, spray using about 80 – 90 pounds of air pressure.
7. Apply non-skid from waist high. The object is to evenly distribute the texture. Applying too heavy will bury the grit, diminishing its non-skid capabilities.

NOTE: Spray first coat smooth to avoid pinholes. Pinholes will allow moisture to penetrate the coating and cause rust and delamination.

8. SL-1000™ TROUBLESHOOTING

PROBLEM	CAUSE	REPAIR SOLUTION	FUTURE PREVENTION
Damaged cans due to shipping.	Mishandling during shipping.	Refuse damaged materials at the time of delivery and contact Industrial Polymers at time of delivery. (Report all claims within 7 days)	N/A
Lid will not come off Part A can	Excess resin in seam of the lid has hardened.	Use can opener to remove lid or turn over and remove bottom.	Please notify Industrial Polymers if problem persists.
Material does not gel in can.	Material is too cold or too warm.	Slowly bring material to room temperature. Keep in mind that once the material is mixed, you have approximately 15 – 20 minutes to spray the gallon. You must discard the material if you go beyond this time limit.	Refer to Section 5- Storage, of this reference guide.
	Over mixed.	Options are to spray material on the horizontal areas of the surface or discard material.	Refer to **Section 3-Mixing SL-1000™**, of this reference guide.
	Too much pigment.	Options are to spray material on the horizontal areas of the surface or discard material.	Refer to **Section 3-Color pigment into B-side**, of this reference guide.
	Wrong pigment base	Discard **SL-1000™** with wrong pigment base and mix a new gallon with proper pigment base.	Use Speedliner® pigments, PPD pigments or other automotive pigments (pure pigments only).
Pigment looks coarse and uneven while mixing.	Wrong pigment base	Check pigment base. Contact Industrial Polymers for clarification.	Use Speedliner® pigments, PPD pigments or other automotive pigments (pure pigments only).
Material has inconsistent color or spots on surface.	Jiffy Mixer is not clean	If within 24 hours of original spray, spray surface with TopCoat #6 or SL-1000™. If after 24 hours of original spray, spray surface area with Primer 450. Allow 30 minutes drying time and then spray with TopCoat #6 or SL-1000™.	Clean blades on jiffy mixer after each use and refer to **Section 3-Color pigment into B-side**, of this reference guide.
Large areas of inconsistent color on surface.	Pigment has settled at the bottom of the B-side.	If within 24 hours of original spray, spray surface with TopCoat #6 or SL-1000™. If after 24 hours of original spray, spray surface area with Primer 450. Allow 30 minutes drying time and then spray with TopCoat #6 or SL-1000™.	Properly mix color into B-side and immediately mix with A-side
Material runs.	Initial coat sprayed is too thick.	Use paint brush to brush out initial coat and respray SL-1000™.	Spray SL-1000™ in even coats to build thickness.
	Material in hopper is too thin.	Use paint brush to brush out initial coat and respray SL-1000™.	Refer to **Material does not gel**, of this troubleshooting section.
Material runs. (Cont.)	Primer is not dry.	Use paint brush to brush out initial coat and respray SL-1000™.	Refer to **Section 2-Applying Primer**, of this Reference Guide.

Material too coarse.	Air pressure too low.	Within 24 hours of original spray, use 4 mm tip and respray SL-1000™. If more than 24 hours of original spray, you will need to reapply Primer 450.	Refer to **Section 4-Spraying SL-1000™** of this Reference Guide.
	Too far away from surface.	Within 24 hours of original spray, use 4 mm tip and respray SL-1000™. If more than 24 hours of original spray, you will need to reapply Primer 450.	Refer to Section 4-Spraying SL-1000™ of this Reference Guide.
	Too fast with spray pass.	Within 24 hours of original spray, use 4 mm tip and respray SL-1000™. If more than 24 hours of original spray, you will need to reapply Primer 450.	Refer to Section 4-Spraying SL-1000™ of this Reference Guide.
When removing tape, material does not pull evenly.	Material is too dry.	Clean edges with cotton fabric and rubbing alcohol.	It is best to remove tape immediately, especially when using Kevlar®
Coating still soft next day or several days later.	Too cold.	Allow liner to cure at 65˚F or higher.	Heat spray area to cure at 65˚F
	Pigment type.	Allow variance in curing time by pigment color.	Red, Dark Green, Blues and Grays are slower to cure in cold temperatures.
	Ratio problem.	Remove SL-1000™ and respray SL-1000. Contact Industrial Polymers.	Refer to Section 3-Mixing SL-1000™, of this reference guide.
Hairline cracking	Too cold while curing	Clean surface area with M.E.K., reprime with Primer 450. Allow 30 minutes drying time. Respray a thin coat of SL-1000™ with the 4 mm tip of the hopper gun.	Heat surface area to 65˚F or higher.
	Too much material layer too quickly.	Clean surface area with M.E.K., reprime with Primer 450. Allow 30 minutes drying time. Respray a thin coat of SL-1000™ with the 4 mm tip of the hopper gun.	Spray SL-1000™ in even coats to build thickness.
Cured liner blisters	Water or other contaminants.	Cut out blisters. Feather down edges with nylon cup brush. Spray area with Primer 450. Allow 30 minutes drying time and spray SL-1000™.	Check air filter and air compressor for moisture.
	Primer not dry.	Cut out blisters. Feather down edges with nylon cup brush. Spray area with Primer 450. Allow 30 minutes drying time and spray SL-1000™.	Refer to Section 2-Applying Primer, of this Reference Guide.
Corner or edge of liner lifts up.	Improper sanding and/or no primer.	Resand, wipe with M.E.K. and glue down lifted area with multipurpose super glue.	Make sure edges are always well sanded and that Primer 450 is applied to all corners and edges.