

SETTING UP FOR Spray-on Bedliners

By Jake Rishavy

Seven tips for shops considering entering the spray-on liner market.

WITH PROFIT MARGINS often ranging from 150- to 250-percent over product cost, and consumer interest steadily growing each year, the spray-on bed protection market offers restylers an attractive way to create an additional profit center.

Add to that a number of new advances in product technology that are making it far simpler for accessory centers to quickly integrate spray-on capabilities into their existing business, and this restyling fruit seems ripe for the picking.

To fully maximize the considerable potential of this market, manufacturers say that shops need to start with the end in mind. When setting up a shop to perform the installation of spray-on bedliners, restylers need to begin with an efficient overall shop layout, stay abreast of local and national spray ordinances, and be mindful of a number of installer-safety issues... among other things.

With these important tasks in mind, we asked technical gurus from five manufacturers of spray-on bedliners for their suggestions, and they in turn suggested seven tips for shops looking to create a safe and profitable spray-on installation center.

1.) Focus on Overall Organization

As with any installation operation, profitably installing spray-on bedliners begins by setting up an efficient and organized shop, long before the first truck bed is ever sprayed.

Having a well-organized shop setup allows restylers to focus on what is most important: performing flawless installations and creating satisfied customers.

When initiating that setup, manufacturers can play a vital role in guiding a newbie to the spray-on bedliner market, says Christa Martin, technical manager for San Diego, Calif.-based Rhino Linings USA Inc.

"You have to plan for everything," says Martin. "We help shops with layouts, site selections and a number of related issues at this very important stage of the process."

Martin says that more important than having a large space to dedicate to the installation of spray-on bedliners is having an efficient layout for the space.

"You don't need a terribly large amount of room to set up a new business of this sort, but you do need to be well-organized," she says.

Ultimately, an efficient setup provides an opportunity to ensure that a shop is known from the beginning to be a rep-



Proper safety equipment—including a head covering, face shield, paper spray suit, fresh air supply and protective gloves—is an essential part of any shop setting up to offer spray-on bedliners.



A flawless and efficient spray-on bedliner installation begins with a well-organized shop with adequate space.

utable and reliable installer, says Kevin Dunn, technical director for Volatile Free, Brookfield, Wis.

“Organization reduces your chances to make mistakes,” he says. “And your reputation is on the line with that.”

And beyond eliminating mistakes, having a well-organized setup allows a shop to quickly move customers through the process, says Garry Froese, president and CEO of Springfield, Mo.-based Armor Thane USA.

“As in most installations, being able to accommodate and service the customer in the best way possible in the least amount of time is the best way,” he says. “Having a shop setup that is streamlined to get vehicles in and out in several hours would be advantageous.”

2.) Create Dedicated Staging Areas

Because the process of creating spray-on bedliners is one that involves reactive chemistry and is inherently messy, sources suggest shops dedicate separate areas for prep work and application.

“We feel that [having multiple rooms] is the best way to achieve an efficient installation operation,” says Froese.

He adds that shops should create one area where technicians remove grease and wax from the truck bed, sand it and then solvent-wipe the surface for application; and another to mask and prime the bed before coating it with the bedliner material.

Martin says having two dedicated rooms ensures that there is no cross-contamination, which can be detrimental to a proper installation.

“It is very important to maintain separate areas because they are distinctly different steps,” she says. “You use certain solvents to clean off the bed and you don’t want to do that in your application room. Also, that prep area is where you prep the surface and sand, and you don’t want those particles flying around in your application booth and have them get back into the bed. It’s better to have the areas separated.”

While each manufacturer’s product is slightly different and thus requires slightly different application areas, Rhino Linings suggests that new shops utilize between 1,400- and 2,000 square feet of workspace for installations.

“The spray booth itself is typically 18-feet-by-16-feet-by-11-feet, but you need prep areas and bench-work areas,” Martin says. “Shops that already have prep areas can do less than the suggested square footage.”

3.) Minimize Moisture

Because of the chemical reaction that cures the urethane material used in spray-on bedliners, moisture—both in the shop air and in the compressed air used to power the equipment that applies the liners—is one of the most troublesome variables in the application equation.

Knowing that, the compressor that a shop chooses plays a major role in installing a quality product.

“We continue to see a lot of people that have inadequate air delivery and poor quality of air delivery, and by that I mean a lot of moisture in the air lines,” says Robert Hensley, division manager for Zolatone Automotive, Industrial & Marine, Los Angeles, manufacturer of Tuff Rider Urethane Liners. Hensley says that water or oil in the air lines can be very problematic as moisture can react with the catalyst—which also contains isocyanates—and cause it to cure prematurely.

“What can happen is the moisture in the lines can cause the catalyst to cure and the material begins to harden in the can



Zolatone Automotive, Industrial & Marine

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ArmorThane USA

One area of a shop can also be dedicated to prepping and spraying the removed tailgate.



ArmorThane USA

Performing prep work in a separate room ensures that sand and paint particles won’t end up embedded in the liner.

SETTING UP FOR
**Spray-on
Bedliners** *continued*

Zolatone Automotive, Industrial & Marine



Once a vehicle has been sanded and taped-off, it can then be moved to a dedicated application area for spraying.

ArmorThane USA



Be sure to know and understand your local spray ordinances before applying your first liner.

before you can get it all sprayed,” he explains.

If moisture or oil is present in the air lines, there are oil-coalescing chambers and filters available and many manufacturers offer desiccant dryers [utilizing silica-treated beads, filters and/or membranes] to remove moisture, he says.

According to Ehren Klein of Pinnacle West Enterprises/Indy Liners, Sumas, Wash., most manufacturers will have minimum compressor requirements for their spray systems.

“In general, low-pressure systems will require a compressor that will deliver 15-17 cubic-feet-per-minute [cfm] at 90 pounds-per-square-inch [psi], and high-pressure systems need 22-25 cfm at 90 psi. But installers should always check with their equipment manufacturers for exact specs,” he says.

Volatile Free’s Dunn says stored materials in drums are also prone to moisture damage and, as such, should be equipped with desiccant cartridges.

“Humidity should be no higher than 80 percent in the shop air, but in your air lines you need completely dry air,” he says. “You really need to make sure that you don’t have any moisture contamination going into your materials. Water is obviously the downfall of anything with isocyanates. [Protecting the materials from water is] a must. If you don’t do that, then don’t even go into the business.”

4.) Ensure Proper Ventilation

In addition to setting up a well-organized working area and battling destructive moisture, shops should also be equipped to provide proper ventilation to avoid isocyanate-related health risks for installers.

Isocyanates have been a part of the automotive industry for many years. They are common in the urethane clear coats applied to vehicle paint jobs, and are also present in the catalyst that cures the urethane in spray-on bedliners.

Because isocyanates have been associated with serious health risks, installers must wear the proper safety clothing and respiratory equipment, and shops must create a spray booth that has adequate ventilation.

“Ventilation should not be overlooked during the setup of a new spray shop,” says Klein.

There are several things to consider when setting up an application room, he says. Once the spray booth size is determined, calcula-

tions for fan requirements can begin, starting with air movement through the booth.

For crossdraft booths, this is known as *face velocity* and for downdraft booths, it's known as *downward velocity*. A shop will need to be sure the fan selected for a spray booth will meet the cfm requirements of a booth of that size, says Klein.

To calculate the cfm of air required to produce the desired face velocity in a crossdraft booth or the downward velocity in a downdraft booth, Klein suggests using the following formulas:

Crossdraft cfm = inside height x inside width x desired face velocity [depth is not a consideration]

Downdraft cfm = inside width x inside depth x desired downward velocity [height is not a consideration]

Next, says Klein, a shop must determine the static pressure in the ductwork. Static pressure is the resistance to air movement in the ducts, and is important in choosing a fan. The fan you choose must be able to deliver the required cfm at the static pressure level inherent to your ductwork.

Also, "the makeup of air for the booth should come from inside of the shop, not directly from outside," he says. "Pulling air directly from the outside will allow fluctuations in temperature, and in high humidity areas it will be pulling the moist humid air through the booth, which could cause curing problems with the polyurethane."

To keep the airflow moving at its optimum level over time, shops are advised to create a booth equipped with filters to collect any overspray from the application process, notes Dunn.

"You're going to have a requirement of air to keep that booth flowing properly," he says. "You can have outside people come and test it to see what the airflow is and the turnover rate. And if you're building, you'll probably want to install adequate vents with dampers on them, which can be hooked up directly to open when the booth is on, or just to pull manually during that time."

5.) Utilize Proper Safety Equipment

With the inherent risks involved with the application of spray-on bedliners, proper safety equipment—including a head covering, face shield, paper spray suit, fresh air

While every spray-on application area is different—especially those added to an existing facility—this suggested shop layout is one example of creating dedicated spaces in which to perform each of the steps in the application process.



Rhino Linings



IndyLiner



Ultimate Linings

Taping plastic on booth walls and using cardboard or other disposable materials on the floor makes it much easier to clean up after a day of spraying.

SETTING UP FOR
**Spray-on
Bedliners** *continued*



Rhino Linings

A well-organized, safe spray area allows shops to maximize their opportunities with spray-on bedliners.

supply and protective gloves—is an essential part of any shop setup.

Because isocyanates are odorless and colorless, a complete fresh-air breathing system with a face visor is definitely near the top of any manufacturer's list of suggested safety equipment, says Zolatone's Hensley.

"The best way to supply air to the visor is through a separate compressor that is designed to supply fresh air," he says. "Although not recommended, it's not uncommon throughout the industry to hook into the normal air delivery equipment, and people will do that.

"The problem is that you need to be sure there isn't a car idling near the compressor that delivers shop air, and also make sure the compressor isn't putting out a lot of impurities," he continues.

Hensley also suggests that commonly used charcoal respirators [although not fully effective for spraying isocyanates] should be changed regularly to ensure the health safety of employees.

"Isocyanates are colorless and odorless and charcoal respirators may not fully protect the individual," he says. "Because the isocyanates are colorless and odorless, you really don't know if the respirator is effective enough. Additionally, isocyanates can be absorbed through the eyes as well."

According to Rhino Linings' Martin, if adequate safety precautions are taken, the process isn't normally dangerous to personal health.

"You have to wear your personal protective equipment, you have to have ventilation and typically if you have that all set up, then you're in pretty good shape," she says.

"With this process, you need to wear a fresh-air respirator with your face covered and be hooked up to a fresh-air pump," she

adds. "Chemical-resistant gloves are required, and the whole body should be protected from exposure from various aspects of the chemical process."

Volatile Free's Dunn agrees on the need for the aforementioned safety equipment and adds that as many of those items as possible should be made disposable for easier cleanup and other safety-related issues.

"It's just good hygiene and safety to cover every part of the body that you can possibly cover, and to have things disposable is better than having them reusable," he says. "If someone reuses something, who is to say that you're not getting chemicals on the inside of the gloves when you take them off or when they're laying around the shop, for example?"

Dunn says that non-disposable items like face shields can be equipped with a thin film that can be removed after each job.

"Otherwise that shield will pick up a lot of the overspray and pretty soon you're trying to find an open spot of 2-inches-by-2-inches to see through," he says. "But, in general, if you don't get it on you and don't breathe it in, you're safe."

6.) Tips for Easy Cleanup

While the process of applying spray-on bedliners is inherently messy due to the nature of the applications, a few simple steps will save a shop valuable time during the cleaning process at the end of each day.

Just as it is advisable to utilize as many disposable pieces of safety equipment as possible, so it is throughout the entire process. The more a shop can dispose of, the less that has to be cleaned.

Dunn suggests that in addition to utilizing disposable tools and safety equipment, a shop keep as much of its equipment out of the spray booth as possible.

"If you can keep everything separated from your booth except the gun and the lines going into it, and keep everything disposable as much as possible, that is going to provide you with the easiest cleanup," he says. "Some tips beyond that would be taping clear plastic on booth walls. You can just strip it off and hang new plastic."

Dunn also suggests cardboard or masking paper [others add roofer's felt] on the floor to avoid product buildup.

"Otherwise, you'll spend more time scraping your floor than you will spraying trucks," Dunn says.

He also suggests coating the exposed portions of air filters in the booth with white lithium grease to aid in the cleaning process.

"Also, clean everything when you're done using it so that you don't return to it the next day and it's not operational," he adds. "The longer it sits, the worse it's going to get clogged up."

Many equipment manufacturers now offer guns with disposable mixing tubes and spray tips for easy cleanup.

7.) Know Your Local Spray Ordinances

As with any business dealing with potentially dangerous isocyanates, installers of spray-on bedliners should be acutely aware of local, state and national regulations pertaining to the industry when setting up a shop to perform installations.

"Everyone needs to be aware of regulatory information, whether you're doing chemistry or paint or bedliners," says Rhino Linings' Martin.

There are two main concerns that shops should be conscious of in regards to spray-on bedliners. The first is local fire marshal regulations, and the second is national OSHA Permissible Emission Limits, or PEL limits, for isocyanates.

"That is where your ventilation and your engineering controls—meaning your application room and your personal protective equipment—come in," Martin says.

Shops are urged to contact their manufacturer representatives for help in determining and complying with local and national regulations.

"It is very important for applicators to comply with local, state and federal spray ordinances," says Klein. "Failure to comply can result in fines, citations or shop closure. And worst of all, employee health risks."

According to Klein, a shop owner can contact his or her local OSHA office and ask for an industrial hygienist to find more information about local health and safety regulations.

Contacts for OSHA can be found by phone at (800) 321-6742 or by visiting the OSHA website at www.osha.gov.

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