

## Testing of Wood Finishes for Durability - July 2005



In the bed wood finish test series last summer we evaluated products widely advertised and available in paint stores or home improvement stores. We applied them in a standard way either brushing or spraying 2 or 3 coats, according to the instructions with each product. Some of the coatings were applied over a linseed oil seal to improve their durability. All the coatings tested showed failure in less than 6 months, most in less than 2 months of continuous exposure to the weather. While continuous exposure is more severe than most custom or classic trucks would experience, we are hoping to find a finish that will last longer to satisfy the needs of most truck owners.

For this second round of tests, we are using more exotic coatings such as would be used in marine applications or exterior architectural coatings. Since the coatings that were applied over a seal coat seemed to last longer in the first tests, we are using that technique in different combinations for several of the test coatings in this second round of tests. We are also including some testing of finishes on Pine boards. The clear coatings include two types of clear marine epoxy, Pelucid by POR 15, Glisten by POR 15, Aliphatic Urethane, Minwax Helmsman, and Automotive clear coat. We will also be including Minwax Helmsman varnish applied on boards that have been sealed with linseed oil. Clear coatings for exterior use such as Minwax Helmsman have ultraviolet absorbers which protect the coating and the wood substrate from damage caused by ultraviolet from the sun. With long term exposure to the sun, ultraviolet absorbers will eventually deteriorate and allow the harmful ultraviolet rays to penetrate to the wood below. That is why even top quality clear coatings need to be sanded and re-applied when they are exposed to the sunlight for extended times. We expect the combinations used in these tests will result in finishes more durable than those in the first tests and hopefully these test results will help you decide if such a finish is worth the time and expense for your application.

As before, we are testing 10 finish systems with 3 boards being coated with each system for a total of 30 boards. Each board is about 5" X 24", red oak or yellow pine, sanded and machined as we do for all our bed wood products. All the boards are

attached in the test fixture and held in place with *Mar-K* type 430 unpolished stainless bed strips and polished stainless bolts. The boards are coated on all surfaces, with the ends being coated as much as they will absorb. Sharp edges of the boards are all sanded to a slight radius to reduce the tendency of coatings to thin at sharp edges. The specific method of application for each coating is different and is described in detail below. The test fixture is positioned outdoors on the northwest side of our manufacturing plant and will be exposed to weather continuously until the coatings fail.

The rules of the test are simple. We coated the boards with each product according to the supplier's instructions and allowed them to cure as recommended before exposing them to the elements. Our intention is to leave the samples outdoors continuously exposed to the Oklahoma weather until all coatings have failed. Results and observations will be reported and posted during the test.

## **Products and Procedures**

We purchased all these coatings and products from suppliers just as a typical consumer would do and used our best judgment and experience along with the manufacturers' recommendations in deciding on the application method. We do not currently sell any of these products and have no affiliation with the companies or products involved. Our purpose in these tests is to help our customers decide what coating system may best meet their needs. Because of the many variables in the materials, application methods, and environmental conditions, these results may not be the same as you will experience. Use them only as a comparative guide. We recommend that you perform your own evaluation of the finish that you select before coating your complete bed wood set, especially if your truck will be exposed to the sunlight and weather. Begin your tests early in your restoration process so you will have your own results when you are ready to finish your bed wood. MAR-K can provide small pieces of Oak or Pine bed wood for your testing purposes.

### **Epoxy coatings.**

We have selected two epoxy products to include in these tests. In general epoxy is a two-component coating and is very strong and tough. It adheres well to wood and is resistant to water. Epoxy is not resistant to ultraviolet rays and is readily degraded by sunlight, which is why epoxy is not used as a clear finish topcoat. We used the epoxy as a "primer" and coated it with a clear finish that is resistant to the sunlight, thereby gaining the durability and adhesion to the wood provided by the epoxy and combining it with a clear finish coat that is resistant to the sunlight. These tests will evaluate the effectiveness of this type of coating system.

### **CPES by Smith & Co**

The epoxy called CPES (clear penetrating epoxy sealer) was purchased from Smith & Co. It is applied by saturating the wood boards with the epoxy as much as possible

then applying the top coating when the epoxy is dry to touch but roughly half-cured, about 1-1/2 days later. According to the CPES instructions this will cause "the second material to cure first and the resin film of the CPES to cure last, gluing down the second material."... "The CPES glues down the varnish and the ultraviolet absorbers in the varnish protect the epoxy and the wood from degradation by sunlight." We used automotive clear coat paint and aliphatic urethane as topcoats over CPES in these tests. By applying multiple coats and block sanding between coats of the topcoats, we were able to obtain an acceptable smooth glossy finish. This finish product is being used on both pine and oak for this test.

### **RAKA 350 epoxy with RAKA 127 hardener by RAKA Inc.**

The second epoxy tested was supplied by RAKA INC. This supplier recommended applying several coats of the epoxy with 12 hours between coats and then allowing the epoxy to fully cure for at least a week before applying secondary topcoats such as varnish. We allowed over a month to cure, then the epoxy was block sanded to obtain a smooth surface and to provide a mechanical bond between the epoxy and the topcoat. We used Minwax Helmsman and automotive clear coat as topcoat finishes for the RAKA epoxy. This initially resulted in a deep looking glass-smooth finish and is quite attractive.

### **PELUCID by POR-15 and HELMSMAN by Minwax**

Pelucid is a single component polyurethane clear coating. In the first series of tests last year, we tested Pelucid by itself and found it to be quite durable. As noted, however, it is not intended for continuous outdoor exposure. Although adhesion was good, the sun darkened the wood significantly and some small cracks in the finish occurred. For this second test, we used the Pelucid as a primer coat to seal the wood and provide adhesion and used Minwax Helmsman Spar Urethane for a finish coat to provide UV protection. We applied three coats of Pelucid a few hours apart then allowed it to cure 4 days. When cured the Pelucid was block sanded and then three coats of Minwax Helmsman Spar Urethane were applied. This system is being tested on both pine and oak.

### **GLISTEN PC by POR-15**

Glisten PC is a two component high gloss clear top coat designed for wood surfaces. It has UV protection and is intended for exterior use. It is also resistant to many chemicals so it would appear to be well suited for pickup bed applications. We applied one full coat and allowed it to cure 24 hours before sanding and applying 3 more coats. No additional top coat is needed since Glisten is resistant to the sunlight and is designed to be a topcoat.

### **POR-15 Black Rust Preventative Paint and BEHR Gloss Black exterior paint**

POR-15 Rust Preventative Paint dries to a very hard waterproof finish but it is UV sensitive. We applied three coats of black POR-15 Rust Preventative Paint paint to the boards and topcoated with the same BEHR gloss black paint that was used in the first test series. The POR-15 Rust Preventative Paint will provide the strength and adhesion and the BEHR gloss black will provide the resistance to sunlight.

These procedures and coatings are only some samples of the many types of finishes available. This is an accelerated test because of the continuous exposure and failures probably will occur sooner than would be expected on a typical custom bed wood application. Most customers would not park their custom vehicle unprotected in the sun and rain during the heat of the summer. The finished bed wood should be considered like a piece of furniture and not neglected. One must remember that wood is not a stable material like steel and is continuously changing and deteriorating. Because of varying environmental conditions, wood is always in the process of either drying out or gaining moisture, as well as being attacked by the ultraviolet rays of sunlight. It is only as durable as the finish that is applied and maintained. Here are some other suggestions and helpful bits of information.

- Always do experimenting with the finish selected to see how it responds to your application method. The experiments should be done on scrap wood that is the same as the bed wood, but not on the bed wood. Do not apply second and third coats too soon or too late. There is an optimum "time window" in which adhesion between coats will be the best and it is different for each kind of finish.
- Exposure of bare wood to sunlight will discolor the wood and will also reduce the adhesion of the coating due to deterioration of the wood surface. Coat the wood as soon as is practical and do not store it where it is exposed to sunlight.
- Sand a radius on all sharp edges to improve coating thickness at the edges. Our testing has shown the most failures at the edges of the boards, probably due to thinning of the coating at those points.
- Moisture and sunlight (ultraviolet rays) are what cause the wood and finishes to fail, especially when both are present. Protect your finished bed wood from both.
- If you must drill holes in the wood after it is finished, be sure to smooth the edges of the holes and coat the inside of the holes with the finishing material.
- After the wood is installed, frequently check the wood finish for signs of failure. Usually these will first occur at the sharp edges or as a hairline split beginning at one end of the board. As the tests show, these failures can occur in as little as one month, depending on conditions, and they will not heal themselves. All problems should be repaired right away to maintain the long life of the finish. You cannot "paint it and forget it" like a finish on metal parts.
- In general, pigmented premium paint will provide longer lasting protection from sunlight damage than clear finishes. Also, gloss paints generally have more resistance to sunlight damage than semi-gloss or flat finishes.

### ***Bed Wood Finish Test Update, November 1, 2005***

The second test group has been in place for over three months. There is not much to report because none of the test finishes have had any failure at this time. All look great and we believe some of these finishes could be very durable and long lasting. Because there has been no degradation or failure, it is not possible to predict which would likely be the best.

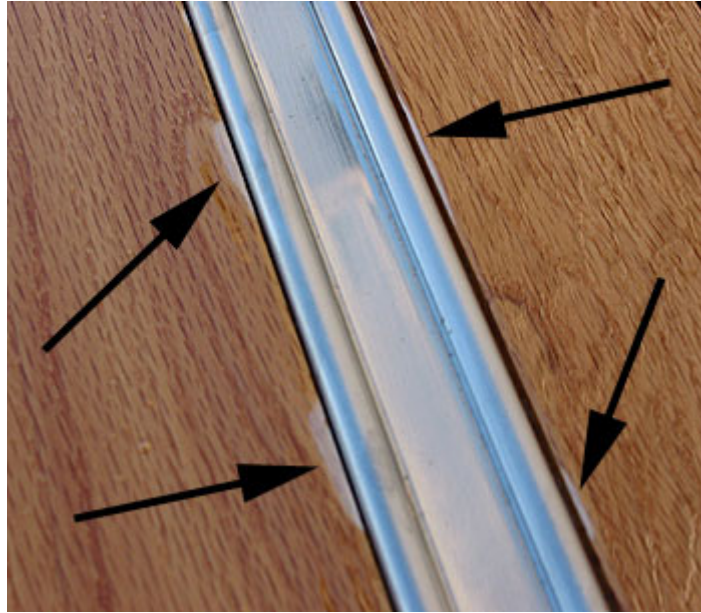
The second test series is intended to evaluate the benefit of using more durable and difficult finishing methods, including epoxies, two part urethanes and clear coats. The use of these finishing systems is time consuming and requires close attention to detail. Hopefully the benefit is worth it. A couple items to keep in mind when comparing the current tests to the first test.

1. The first test started a little earlier in the summer of 2004 and saw more severe summer weather extremes than the second test
2. Most of the finishes in the first test had shown at least some indication of failure by the two-month time period. This is probably due to the severity of the weather in summer 2004 and to the use of simpler less effective coating systems in the first tests.

### ***Bed Wood Finish Test Update, November 21, 2005***

The wood finish test continues at Mar-K. We appreciate all the questions and suggestions you have written and the interest shown. Hopefully these tests will help you make educated choices regarding your bed wood finish. At this date, all the finishes except one have shown no indication of failure.

The GLISTEN product by POR15 is showing failure peeling or separation after 4 months of continuous exposure to the weather. This failure was first noted about November 15<sup>th</sup>. The weather during this test has ranged from 100 degree summer weather in the direct sun to mid twenty's late fall cold weather and it has been unusually dry with little rain and no snow to date. GLISTEN is the only finish system in this test that does not consist of a sealer or penetrating prime coat followed by a topcoat of some kind. Glisten is promoted by POR15 to be suitable for exterior use and no prime coat is suggested. All other products in the current test are doing very well with no noticeable discoloration or peeling.



The photo shows the areas of failure. There are several places along the edges of the boards next to the bed strips that are beginning to separate as indicated by the white translucent spots. You can see the failure is not isolated but is evident on several of the GLISTEN coated boards. It is not evident whether or not the peeling is between coats of the GLISTEN or separation of all the coats from the wood itself. If this were in your truck bed, you would probably just sand it and recoat the damaged areas to get some more life out of the coating since the center areas of the boards appears to be still intact. We will allow the coating to continue in the test without repairing it at this time.

A few general comments about GLISTEN. It made a very hard glossy surface that was quite attractive. It is a two component product that you mix and apply somewhat like automotive clearcoats. It sprays on smooth and it is not necessary to buff the GLISTEN to make it shiny. GLISTEN was probably the easiest of the finishes in this test to apply and it may make a satisfactory finish if your truck is not often exposed to the weather. Needed repairs could be easily made by sanding the damage areas and using a touchup gun to spray on a few more coats. It is available in small quantities from POR15 and we suggest you do testing in your own environment before committing to this coating.

Wood finishes are usually weakest at the edges of boards since coatings naturally are thinner at a sharp edge. All the boards in the test including these three that failed were sanded before coating and all the sharp edges were 'eased' by sanding them to a slight radius. The failure may have been delayed if the boards had been sanded to an even more rounded edge before they were coated. This would have allowed the GLISTEN to be a little thicker on the edges and possibly prolonged the life of this coating. No matter what coating you use, it will probably give longer life if you round all the edges significantly to help prevent this weak area.

## ***Bed Wood Finish Test Update, December 31, 2005***

There is no visible deterioration of the finishes since the last update. The test has been in place since July 2005, continuously exposed to the Oklahoma weather. The boards have been washed and cleaned periodically, but have not been waxed or protected from the weather. This update will be more of a general description of the appearances of the finishes and how well they are doing from a purely cosmetic view.

1. CPES epoxy with aliphatic urethane topcoat. This is an oak sample and it is coated with one heavy coat of the CPES epoxy and then topcoated with Aliphatic urethane after the epoxy had cured about 36 hours. Three coats of Aliphatic were sprayed, without sanding between coats.
  - This coating has darkened slightly, probably from UV exposure.
  - The coating is not glass smooth but is still shiny and is attractive.
  - The boards are fully sealed and there are no visible defects.
2. CPES epoxy with Minwax Helmsman Spar Urethane topcoat. This is a pine sample and it is coated with one heavy coat of the CPES epoxy and then topcoated with three coats of Helmsman after the epoxy had cured about 48 hours. Helmsman was scuff sanded between coats.
  - The coating has darkened slightly but is still very attractive.
  - The boards are still well sealed and no flaws in the coating are visible.
3. RAKA epoxy with automotive clear topcoat. This is an oak sample. Two coats of the RAKA epoxy were applied and allowed to fully cure more than 7 days. Then the epoxy was block sanded smooth before spraying 3 coats of PPG clearcoat. The clear was not sanded or buffed.
  - This coating is water clear and has not darkened.
  - The oak still looks pink, practically matching the color of unfinished red oak. If you want a traditional amber color oak wood, this finish may not work for you.
  - The finish is glass smooth with no noticeable texture or orange peel.
  - The boards are sealed well and there are no visible flaws
4. CPES epoxy with automotive clear topcoat. This is an oak sample. One heavy saturating coat of CPES epoxy was applied then topcoated with 3 coats of PPG clearcoat after the epoxy had cured about 36 hours.
  - The coating is a very light color, darkening only slightly.
  - The finish is not as smooth as the #3 sample probably because the CPES was not block sanded.
  - An attractive finish, still very glossy surface.
  - The edge of one board may be showing a failure, possibly from insufficient coating thickness. The other boards and surfaces are sealed and showing no flaws. We will watch this one.
5. RAKA epoxy with Minwax Helmsman Spar Urethane topcoat. This is an oak sample. Two coats of RAKA epoxy were applied and allowed to fully cure more than 7 days. Then the epoxy was block sanded smooth before spraying 3 coats of Helmsman, scuff sanded between coats.

- The wood has an amber color, typical of the Helmsman coating.
  - The surface is smooth and glossy.
  - The edge of one board may be showing a failure, possibly from insufficient coating thickness. The other boards and surfaces are sealed and showing no flaws. We will watch this one.
6. Pelucid primer coat with Minwax Helmsman Spar Urethane topcoat. This is an oak sample. Three coats of Pelucid applied 3 hours apart, then allowed to cure for four days. After block sanding, 3 more coats of Helmsman were applied, scuff sanded between coats
- The coating has darkened the wood slightly.
  - No flaws are visible and the boards are fully sealed.
7. POR-15 Rust Preventative Paint with Behr black glossy enamel. Three coats of POR-15 Rust Preventative Paint applied 3 hours apart and the first coat of Behr applied 3 hours after the last coat of POR-15 Rust Preventative Paint. Two more coats of Behr applied the next day.
- This appears to be a durable black paint system.
  - Possible slight reduction of gloss since the initial application in July.
  - You can see the grain pattern of the wood but the boards are fully sealed and there are no flaws in the coating.
8. Glisten, primer and topcoat. This is an oak sample. One coat of Glisten was applied and allowed to cure 24 hours. It was then scuff sanded and three more coats of Glisten were applied, 1 hour between coats.
- There is more orange peel than the other samples, but it is shiny.
  - Failure of this coating is appearing as noted in previous update (see above).
9. Pelucid primer coat with Minwax Helmsman Spar Urethane topcoat. This is a pine sample. Three coats of Pelucid applied 3 hours apart, then allowed to cure for four days. After block sanding, 3 more coats of Helmsman were applied, scuff sanded between coats
- The coating has darkened the wood slightly, it is a natural looking amber color. Quite attractive.
  - No flaws are visible and the boards are fully sealed.
10. Linseed oil seal with Minwax Helmsman topcoat. This is an oak sample. The boards were saturated with hot (about 120 degree) linseed oil and allowed to cure for 3 months. Boards were wiped with turpentine to remove excess dried linseed oil, then three coats of Helmsman were applied, scuff sanding between coats.
- The oak is darkened, probably both by the sun and by the linseed oil.
  - The surface is not as glass smooth as some of the others, but quite acceptable.
  - There are no defects in the finish, the boards are fully sealed

It should be noted that this has been an unusually dry fall season and the samples have seen less than average rain and snow. Still, there seems little doubt these current finishes being tested are superior to the finishes of the first test. The two stage coatings



system combines the benefit of a strong primer coat with the UV resistance of a good top coat. We will continue to monitor the finishes and bring updates as information is available.

### ***Bed Wood Finish Test Update, April 10, 2006***

This is a brief update of the Mar-K wood finish test series, an on-going comparison of ten different bed wood finishing procedures. This test has been in continuous exposure to the weather since August of 2005.



We noted in a previous update that the Glisten product, sample number 8, was failing. It is peeling away at the edges of several boards. This condition has worsened as shown in the photo.

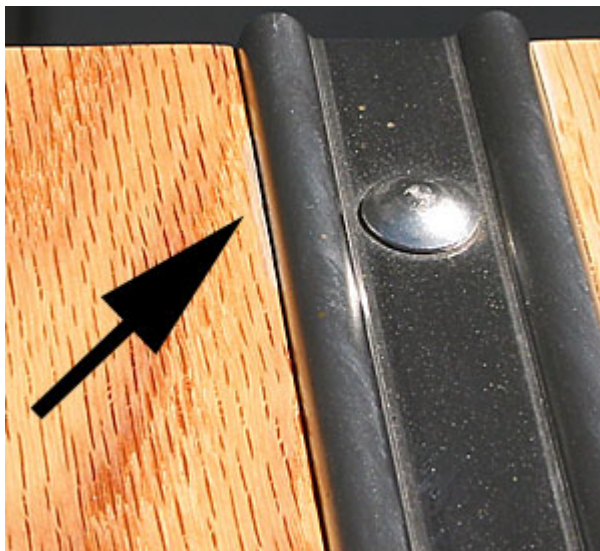


A second possible failure was noted earlier and that coating area of failure has enlarged slightly. It is sample number 5, a combination of RAKA epoxy seal coat and a top coat of Helmsman Spar Urethane. This failure appeared only on one board of the three, but it has gradually enlarged to the size shown in the photo. The RAKA epoxy still is protecting the wood, but epoxy needs a top coat of UV resistant product for long lasting service, so without repair, this coating will eventually fail. Since it is occurring on only one board of the three, it is

possible that the failure is the result of improper application of the Helmsman in that spot, or from contamination of the surface before it was recoated with the Helmsman. We will continue to monitor this coating closely, and provide updates as appropriate.



Sample number 10, a linseed oil seal coat with a Helmsman Spar Urethane topcoat, is now showing a small area of separation, see the photo. The wood is still protected under the varnish by the linseed oil but it will deteriorate soon without the urethane topcoat protection.



Sample number 3 is now showing a discoloration in a few spots, which is typical of the failures we have seen. This finish is RAKA epoxy with automotive clearcoat top coat. The failure is just beginning to show. We will provide more information in future updates as this finish continues to deteriorate.

So far, four wood finish systems have failed, all by having a topcoat separate from the sealing coat in a relatively small area of the board. Also we note that all the boards first showed failure at the edge of the board near the bed strip groove. When we were coating the boards we were careful to have a very generous coating thickness on the ends of the boards, as that area is often the place where failures begin. We have no

failures at the end grain areas of the boards in this test. These coating systems are all significantly better than the coatings of our first series of tests.

### ***Bed Wood Finish Test Update, August 20, 2006***

The current test series for bed wood finishes continues. It has been approximately one year since we placed the ten wood finish samples outdoors in the Oklahoma weather. They have been continuously exposed to whatever Mother Nature has offered since July of 2005. All of the samples currently tested have much greater durability than the finishes tested in summer of 2004. It appears that finish systems which include an effective seal coat followed by protective coats of high quality exterior paint or urethane varnish will provide a long lasting bed wood finish. This is of course a very unscientific test and your results may be different than ours. Note that this Oklahoma summer has seen record heat with many days over 100 degrees and very little rain or moisture. Also remember that this is a somewhat accelerated test since trucks with custom bed wood are usually protected much better than our test samples and would not be left outdoors 24/7 in all kinds of weather. The finish on your bed would probably last longer than one year, but remember that all wood finishes need to be refreshed occasionally, depending on the use or the amount of exposure to the elements.

While many of the test sample finishes have failed at least to some degree, only the Glisten (sample #8) and the Helmsman over linseed oil (sample #10) have failed to the point that it would be impractical to repair. Based on these tests, the Glisten and linseed oil systems would not be recommended for bed wood applications.



The Glisten failed by separating from the wood in a few months as reported in our first update. After several months of continued exposure, it has large areas of separation, pretty typical of what we have seen from finishes that do not have a primer or seal coat. See picture left.





The Helmsman Spar Urethane over the linseed oil sealer began to show separation between the Helmsman and the linseed oil seal coat in the spring of 2006. This was first reported in April 2006. Since that time the area of failure has enlarged and now extends several inches along the edge of the board. See picture left. The separation is more difficult to see since the linseed oil remains to protect the bare wood, although it does not offer the full protection of the original coatings. While this sample could be repaired it would probably require removing the

complete coating of Helmsman and recoating. We do not plan to repair the finish for this test.

Several of the remaining sample coatings have some small failure areas. Only the black painted oak sample with the POR-15 primer and the pine with CPES primer and Helmsman topcoat are showing no sign of failure.

The numbered finishes and their failures are described as follows.

1. CPES epoxy primer by [Smith & Company](#) is the seal coat with [aliphatic urethane](#) topcoat. This finish system on the oak sample has performed very well. There is a hairline crack beginning to show in one of the boards and the end is split in another. All three boards have darkened noticeably. The darkening may indicate the aliphatic urethane has lost some of its UV absorption capability and should be renewed. This system would probably be a very good method of finishing bed wood, and periodic refinishing would be acceptable.
2. CPES epoxy primer by Smith & Company is the seal coat with three coats of Minwax Helmsman topcoat. This finish system is on a pine sample and there are no defects showing. The ends do not seem as well sealed as the pine with Pelucid (sample #9) but no splits or separation has occurred. The wood has darkened noticeably but is still very attractive and well sealed. This finish system is recommended for pine boards that will have a natural finish. We would recommend adding extra seal coats of epoxy on the ends of the boards to provide a better seal.
3. Two coats of [RAKA](#) epoxy as a primer and three coats of automotive clear coat as a topcoat. This finish system is on an oak sample and it has several small

failure areas on the surface but none on the ends of the boards. There is very little darkening of the wood. This sample finish was glass smooth because the epoxy was allowed to fully cure and it was block sanded before applying the automotive clear. The finish did not darken the wood at all, since the automotive clearcoat goes on water clear. Although it has held up fairly well, the finish would not be considered as attractive to most people who would want a more "furniture" like appearance.

4. CPES epoxy primer by Smith & Company is the seal coat with three coats of automotive clear sprayed for a topcoat. This finish system is on an oak sample and it also has some small failure areas. It has very little darkening of the wood. The finish initially was smooth but not quite as smooth as the #3 sample since the CPES was not block sanded before applying the topcoat. The appearance is much the same as RAKA #3 except the ends of the boards have some splits. If this system is used on oak, some more experimentation should be done to penetrate the ends better with the epoxy before applying the topcoat.
5. Two coats of RAKA epoxy as a primer and three coats of Minwax Helmsman as a topcoat. This finish system is on an oak sample and it has some failure areas as was previously reported. There is separation but no splits on the ends of the boards. The finish is a nice amber color and was very smooth because the epoxy was allowed to fully cure and it was block sanded before applying the topcoats. Based on these tests, this finish would probably be acceptable as bed wood finish although not the most durable.
6. Three coats of [Pelucid](#) as a seal coat and three coats of Minwax Helmsman Spar Urethane as a topcoat. This finish system is on an oak sample and it has some failure area, probably the least of all oak samples. One board has a split on the end and there are two areas of separation along the edges of two boards. The Pelucid was block sanded before the topcoat was applied. This finish lasted well before failure and probably would be acceptable as bed wood finish. Pelucid is not usable as a topcoat, but is a durable seal/primer product.
7. Three coats of [POR-15 Rust Preventative Paint](#) as a seal coat and three coats of Behr gloss black enamel. This finish is on an oak sample and it has no failure at this time. The finish has possibly dulled slightly, but is still very glossy and sealed well. The finish has lasted much better than the first test series in which we used Behr primer and topcoated with the same Behr gloss black enamel. Even though POR-15 Rust Preventative Paint is not specified for wood by the manufacturer, it appears to be an effective primer if it is coated with a quality topcoat paint. If you plan to paint your bed wood, this finish system should be considered as it is very durable and easy to apply.
8. Four coats of [Glisten](#) applied as described in the earlier update. This system is on an oak sample and failed early in the test. Based on these tests, Glisten is not recommended for bed wood applications.
9. Three coats of Pelucid and three coats of [Minwax Helmsman](#) Spar Urethane on a pine sample. The Pelucid was cured about 4 days and then block sanded before applying the Helmsman. This finish system is one of the most durable and lasted about a year before a small separation in the finish appeared. The

wood continues to darken slightly, but is still very attractive. The ends of the boards are still totally sealed and shiny. If you plan to use pine wood with a natural finish, these tests indicate this is a good choice for the finish. Periodic refreshing of the topcoat is required for most any finish on wood exposed to the elements and the Pelucid/Helmsman combination seems to work as well as any. The time before failure occurs depends very much on the amount of exposure to the elements and will vary with each person's truck and their climate.

10. Linseed oil as a primer/sealer and Minwax Helmsman Spar Urethane topcoat. This system is on an oak sample and it has failed as noted above. Based on these tests, this would not be the best choice for bed wood applications, although it probably would be acceptable for trucks that are rarely exposed to the weather or moisture. The finish darkened the wood more than most, likely because of the linseed oil color in addition to the exposure to the sun.



All the oak samples with natural finishes have some amount of failure. The best in these tests appear to be sample #6 and sample #1. Oak is especially susceptible to splitting on the ends and special care should be used to seal the ends as much as possible with the seal coat product. See Sample 6 left.



Both of the pine samples with natural finishes are performing very well and we will continue to observe them and report the results. See picture left.



POR-15 Rust Preventative Paint appears to be an excellent primer/sealer and when used with a quality exterior paint should make a good choice for bed wood that is to be painted. See picture left.

For more information see other instructions including:

See a final summary of this bed wood test.

See the June 2010 update.

Find out more about the original wood finish testing.