

# ZYBAR

## Frequently Asked Questions “FAQ’s”

### **OVERVIEW:**

What is ZyBar?

*ZyBar is a high temperature thermal dissipation coating for headers, manifolds and exhaust. ZyBar provides: lower applied cost; increased scavenging performance (which equates to increased engine performance/torque/horsepower; color stability and corrosion resistance.*

Is the primary focus on headers/exhaust?

*Yes, ZyBar is focused on high temperature and harsh header, manifold and exhaust environment.*

Is ZyBar for New Headers and Exhaust?

*ZyBar can be used on new or old headers, manifolds and exhaust. The surface preparation and application instructions are exactly the same.*

What is the difference between ceramic coating and ZyBar?

*Ceramic based coatings offer benefit similar to ZyBar however require excessive time, cost and authorized third party application. The cost of coating a standard set of headers is approximately \$600-\$800 including shipping to & from, surface prep, coating and cure. You cannot do it yourself. In many instances it has taken customers over six weeks to get headers back from ceramic coating houses. To coat an entire exhaust is approximately \$1,100-\$1,200 before the cost of shipping. ZyBar, the only DIY product available in this category, saves you time and money and offers excellent engine performance benefits. ZyBar costs less than 1/3<sup>rd</sup> the amount of ceramic coating. Specific ceramic coatings also have a linear expansion problem when bottling. This creates a buildup of pressure in the package and requires a very delicate “burping” of the container to prevent projecting the material. This expansion issue does not occur with ZyBar.*

How does ZyBar compare to the thick paint on products like POR and Eastwood thermal coatings?

*Customers have provided us their impression of ZyBar compared to other coatings they have used – the competitive products like POR and Eastwood are “okay” but do not do a very good job of standing up to the heat. ZyBar is formulated to withstand the harsh, high temperature exhaust environment. ZyBar thrives in excessive heat. ZyBar is a low viscosity, high solids coating which sprays and atomizes easily in a standard 30 psi spray gun. ZyBar flows incredibly well “nearly like water” through a spray gun, stated several users. ZyBar is applied in 1 – 1.2 mil (.001 - .0012) coating thickness which covers a much greater surface area versus the thick/high viscosity materials such as POR15, Eastwood or other coatings. ZyBar coats easier than traditional exhaust paints which must be brushed on.*



Are there color options for ZyBar?

*Yes, ZyBar is available in three colors at launch. Bronze Satin, Midnight Black and Cast.*

Is ZyBar manufactured in the USA?

*We manufacture the product in the Midwestern United States!*

Is anyone using ZyBar in other areas besides headers?

*ZyBar is new technology. Users and applications will grow exponentially over time. We will continue to build a database of applications, uses and feedback from our customers. We would love to hear from you after using our ZyBar high temperature thermal dissipation coating.*

Are you talking with any OE manufacturers?

*Yes we are discussing possible development and use with several OE and component manufacturers.*

Has it been tested on diesel?

*ZyBar has been dynamometer tested on gasoline and alcohol engines. We have not dyno tested on a diesel engine application.*

Is thermal dissipation different than sound deadening?

*Thermal dissipation is different from sound deadening. Thermal dissipation material such as ZyBar uses micro surface technology to coat into the metal through fissures, microscopic cracks, pores and voids allowing the metal to transfer heat, or pass on the heat to the unrestricted area (air) at an accelerated rate versus untreated metal. Untreated metal in a tube allows the heat to build up around the perimeter of the tube restricting air flow, allowing heat to radiate to the exterior of the tube.*

*Sound deadening is the mass based surface technology that uses the principals of mass, adhesion and conformance to convert vibrational energy into heat. The sound deadening rubber in the material absorbs this heat. The foil constraining layer is a backstop which reflects any excess heat, passing through the rubber, back into the rubber.*

Are you stocking in Olathe, KS?

*Yes, all shipments of ZyCoat, LLC products will occur from our facility located in Olathe, Kansas.*

Other than exhaust, what can ZyBar be used on?

*ZyBar can be used on all gas, diesel and alcohol engines exhaust, headers and manifolds. Automobiles, Trucks, Boats, Motorcycles, Off-Road vehicles and Semi Trucks the focus of ZyCoat, LLC today. ZyBar can also be applied to bolt on heat shields and heat barriers to better dissipate heat.*

# ZYBAR

What is the difference between Powder coating and ZyBar?

*Powder coatings do not last under the extreme temperature and harsh conditions in exhaust applications. They burn off in a very short period of time and offer no performance improvement to the engine. ZyBar is formulated to withstand this harsh environment and was proven to increase engine performance in third party dynamometer testing.*

What is the difference between Silicone coating and ZyBar?

*Silicone based coatings do not last under the extreme temperature and harsh conditions in exhaust applications. Silicones burn off in a very short period of time and offer no performance improvement to the engine. ZyBar is formulated to withstand this harsh environment and was proven to increase engine performance in third party dynamometer testing.*

## **SURFACE PREPARATION:**

Do you have any advice regarding type of blasting cabinet we should buy?

*We do not have a specific brand recommendation as there are several excellent new and used brands of cabinets. However, we recommend that you factor the following points into your purchase decision:*

- 1. Size of the work area (inside the cabinet) and the ability to get parts inside and out easily (opening).*
- 2. Also, IF the part to be blasted will be combinations of used/rusty/grimy and new metal; we advise:
  - a. Old, rusty or grimy parts can contaminate the blast media which then gets re-used. Follow blast media or cabinet manufacturer recommendations for clean out and media replace consideration. Contaminated media can be impinging into the next part(s).*
  - b. IF you plan to blast multiple parts between SS ("Stainless Steel") and CRS/HRS ("cold rolled steel/hot rolled steel), this can also be a source of contamination. We recommend following the media and/or blast cabinet instructions for clean out and media replacement.**
- 3. Confirm operation of oil/moisture separator for the compressed air line feeding the blast cabinet. A poor oil/moisture separator can contaminate the media if water or oil is getting mixed into the nozzle spraying the media.*

How do you prep inside the tubes?

*We recommend blasting **aluminum oxide or garnet sand or media that is designed to etch metal (100-120 grit)** through all openings of the tube for several seconds (minimum of 60 seconds) on each tube opening while turning the tube to allow the media as much contact on the inner circumference of the tube. We then recommend forced air through each tube opening to remove and dust or debris. You can also draw a solvent dipped clean cloth or clean rag through the tubes providing you allow the solvent to completely evaporate from the surface.*



Can ZyBar be blasted off?

*Yes media blasting can remove ZyBar.*

Stainless surface preparation - media blasting - will it scuff it up?

*Yes, scuffing will occur, however ZyBar will bond to the properly prepped stainless steel.*

If I have ceramic coated headers does media blasting take it off?

*Yes, we recommend using aluminum oxide or garnet sand or any other media designed to etch metal (100-120 grit) specifically for the very best in surface preparation. This media will remove the ceramic from the headers and then you are set to apply ZyBar.*

How does a D-I-Y person media blast?

*We recommend taking your headers to your local town automotive paint shop or powder coater. The approximate cost to have a set of headers blasted? The average cost to sandblast a set of headers should not be more than \$30-\$50 per set depending on size.*

**APPLICATION OF ZYBAR:**

Do you need to thin ZyBar prior to use?

*ZyBar requires no thinning or dilution. ZyBar is ready-to-use. Each can is packaged for individual use as defined in the application instructions.*

Is there a big increase in horsepower with an in/out coating?

*During our dyno testing in April we tested long tube headers coated outside only and inside & outside coated. We experienced a 9.10% gain in horsepower between 4000 and 5700 rpm when coating was both inside and outside the headers versus 1% horsepower and torque gain on headers coated on outside only.*

How do you know that you are applying the coating “thick enough”?

*ZyBar technology requires only 1-1.2 Mil thick coating (.001 - .0012). On a media blasted surface if you see the color change from the “gray cast” to the ZyBar color you have likely applied enough material. Since ZyBar will bond to itself you can re-coat any area you feel was light by simply passing the spray gun over that area on two passes (in other words from right side to left of area and then back again). This is especially important with ZyBar-Cast as that color is not significantly dis-similar to the media blasted surface color.*

Do you spray it on?

*We recommend using a low pressure (30 psi) paint spray gun.*

# ZYBAR

What size can I use on different sized components?

*The rule of thumb to follow is:*

*One (1) eight ounce can will coat a set of long tube headers coated outside only.*

*One (1) 4 ounce can will coat a set of "Shorty" headers.*

*One sixteen (16) ounce can will coat a set of long tube headers inside & outside.*

*Assume one (1) ounce per 18" of 2 ½" standard exhaust tube.*

How do you coat inside the tubes?

*For components such as tube or headers ZyBar can be applied as follows:*

- 1. Utilize a flexible hose/wire with jaw clasp at one end.*
- 2. Ball up non-lint clean rags and use jaw clasp to hold rags.*
- 3. Dip the rag into ZyBar and allow rags to soak up coating thoroughly.*
- 4. Pull the rag ball through both ends of each port on tube or header*
- 5. Dip the rag as needed to keep rag wet with coating (very light drip)*
- 6. Hang the component and allow the coating to dry*
- 7. Use a non-lint rag wetted with MEK, Acetone or other like solvent to remove any drips or excess coating that should drain out of the tubes*
- 8. Due to the difficulty with geometries of the component it will not be possible to ensure 100% consistent coverage. We have found this process to be the most thorough with ZyBar.*
- 9. DISCLAIMER: Good coatings do not overcome bad surface preparation or application.*

*An alternative that we have heard others use is the "cap & slosh" method. For components such as tubing which cannot be easily sprayed, ZYBAR can be applied in a manner which flows over the surfaces. To do this:*

- a) Prepare to pour ZYBAR in one end by sealing off all other openings except the planned point of coating entry. Sealing can be done using commercially available silicone plugs, tape and other materials.*
- b) Pour a suitable amount of coating material into the unsealed opening.*
- c) Then seal the "pour" opening.*
- d) Gently rotate the tubes/manifold to permit the coating to flow over all interior surfaces.*
- e) Due to the wide range of manifold geometries and configurations, fully ensuring that adequate coverage has been achieved is not possible. Thus, the greater the number of angles of rotation that are used, the greater the probability of full coverage.*
- f) Drain the manifold or tubular item. NOTE: Be sure to pour out the coating used on the inside surfaces into a second container for disposal later. Cross-mixing of the "virgin" ZYBAR can cause problems.*

# ZYBAR

- g) *Just as in the application of the coating, it is important to fully rotate the pipe/manifolds in numerous angles so as to avoid trapping any coating in recesses. If this happens, the added coating thickness in these recesses will result in the coating “mud-cracking” once it cures.*
- h) *Hang the internally coated part so as to allow for continued uniform draining, until it is dry to the touch.*

*Use a lint free cloth or toweling wetted with MEK or similar solvent (No mineral spirits or naphtha solvents) to remove any coating that has gotten onto the exterior surfaces, before it dries.*

*Note: Saving the leftover material in a sealed container for future use is not recommended.*

I Missed a spot of prepping - what do I do?

*The primary purpose of our four ounce can is for touch up. Once Zybar is cured you can apply a second coat over the surface. A second coat is not necessary for ZyBar performance. It is specifically for touch-up and finishing purposes.*

Should applicant wear gloves?

*It is imperative that anyone using Zybar read and follow both the Safety Data Sheet and Application Instructions which are readily available at [www.zycoat.com](http://www.zycoat.com)*

*Gloves should be worn during handling, use, and application and cleanup of ZyBar.*

Can you put ZyBar over something that is already ceramic coated?

*We do not recommend this and have not done testing to validate this point. However the base coating lamination will determine the top coat lamination. If there are issues with the basecoat the top coat will not perform as designed.*

If you nick a corner after cap/slosh, how do you touch up?

*We offer the 4 oz. size specifically for touch up of these areas. The benefit of ZyBar versus other heat coatings is you can apply a second coat of ZyBar over the first coat of the same. ZyBar is formulated to bond to itself.*

## **CURE:**

Is there an insert for where to go to get application instructions?

*There is no “insert”. Application instructions for ZyBar are readily available on the box label and can also be downloaded from [www.ZyCoat.com](http://www.ZyCoat.com)*

Can header or exhaust be bolted on after \_\_\_\_ amount of time?

*We recommend bolting on components only after cure is completed as explained in the cure section of application instructions. Once cured, bolted on and the engine is initially run, the product will smoke*

# ZYBAR

*once the surface temperature elevates above 500-550 degrees F. This smoke will last 45-60 seconds and then end.*

Is it flexible?

*Yes, after cure we have bent panels 45 degrees with no cracking or delamination.*

How will a DIY customer know the air cure is done?

*When 120 hours have expired from completion of applying the coating.*

Higher humidity? How will that affect the air curing time?

*Excessive humidity (ie >75%) will slow the cure process. . We would advise that you follow the application instructions including ambient temperatures for storage and cure.*

If someone puts in a kitchen oven to cure, what will happen?

*We do not recommend the use of non-commercial rated oven of any kind. We adamantly do not recommend using a "kitchen" oven for curing industrial coatings.*

## **CLEAN UP:**

What solvents can be used for cleaning spray guns and other equipment used in application?

*We recommend using MEK, TBac or Acetone for cleaning after application of ZyBar. Follow the equipment manufacturer instructions for cleaning. We do not recommend use of naphtha based solvents or paint thinner.*

Cleanup the spray gun? How to? Is it possible?

*As noted in the installation instructions we recommend running approved solvent through spray gun to clean out for next use.*

## **OTHER:**

Is there a separate part # for case vs individual skus?

*Single part numbers are used for individual cans. Same part is used for case packs with the quantity defining a case. Each can and case will carry a unique sequence number for lot traceability purposes.*

What's the shelf life?

*12 Months from date of manufacture – each can is clearly marked with expiration date.*

If stock passes the 1yr shelf life, can they return?

*No – the key is to use the product within this shelf life period.*





How does the customer know the date of production?

*They won't know date of production. Each can will contain a date stamp of the shelf life expiration date.*

Guide for sales department requested.

*We will create a tech question list from the installation/application instructions to walk a customer through a tech service call.*

As a distributor, do we send a customer to you if they have a problem?

*ZyCoat, LLC's customer and technical service department (913) 599-2600 is available to answer questions that may surface. Hours are 8AM – 5PM M-F Central United States Time.*

Would you put on turbo-type housings?

*Turbo housings, super charger housings, water pumps, and intakes are additional components that coated with ZyBar.*

How do jobbers/dealers/customers get listed on the ZyCoat dealer locator?

*We will work through our Wholesale Distributors to receive jobbers/dealers for placement on Zycoat.com dealer locator and we will also set up jobbers that purchase on a direct basis. IF you wish to be added to our locator you can call our office M-F 8AM-5PM Central Time (913) 599-2600.*

Did ZyBar get tested for under hood heat reduction?

*We have not tested "under hood" heat reduction specifically. We have tested radiant heat 1 inch above the top center of headers during dynamometer testing.*