

APPLICATION GUIDELINES for Rust Bullet® and Rust Bullet® BLACKSHELL®

Rust Bullet's Patented New Technology provides superior corrosion control and protection.

To ensure you achieve the best possible results, it is extremely important that these Application Guidelines are read thoroughly before use.

Unless specifically stated in these guidelines, the name Rust Bullet applies to both Rust Bullet (Gold Label) and Rust Bullet *Automotive* (Silver Label).

Please refer to the most current Application Guidelines available at www.RustBullet.com or by calling Rust Bullet Customer Support at 800-245-1600.

Rust Bullet®, Rust Bullet® *Automotive*, and Rust Bullet® BLACKSHELL® are super-tough, high-performance, industrial grade, protective coatings. Rust Bullet has been awarded an Unprecedented Two United States Patents on its Two New Technologies in One Rust and Corrosion Control Product. These advanced new technologies provide phenomenal adhesion resulting in unsurpassed rust protection. Rust Bullet coatings provide outstanding protection for iron, steel, aluminum and most other metals; as well as, concrete, wood, fiberglass, and many other surfaces. Rust Bullet coatings required little or NO surface preparation prior to application, saving time, labor, and money. Rust Bullet coatings work best when they are in direct contact with, rusted or clean, base metal or other natural, uncoated surface. If a surface has an existing paint or coating that can not easily be removed, simply rough up the painted surface with 100-150 grit sandpaper or sanding sponge prior to applying Rust Bullet or BLACKSHELL. Painted surfaces should be tested on a small area for lifting or cracking. Rust Bullet coatings provide outstanding abrasion resistance, and are extremely resistant to acid splash and chemical solvents. Rust Bullet coatings may be applied by brush, roller, or spray equipment. Apply evenly without buildup; use the crosshatch method (up and down, side to side) whenever possible and appropriate. Application equipment must be clean and free of moisture and all other paint, especially latex, or paints containing alcohol. The surface to be coated must be completely dry, any flakes of rust and paint should be scraped or wire brushed off. Remove loose mill scale by lightly scraping, sanding, or wire brushing. All surfaces must be free of loose rust, moisture, dirt, mildew, oily substances, wax, loose paint, and loose particles. It is important that the surface to be coated is completely dry. Existing tight paint should be roughed up with 100-150 grit sand paper or sanding sponge to insure proper adhesion. No additional surface preparation is necessary; Rust Bullet Coatings have phenomenal adhesion qualities that provide outstanding results with little or NO surface preparation prior to application. IMPORTANT: Wear protective clothing, gloves, and eye protection during set up, application, and clean up; it is extremely tough to remove Rust Bullet or BLACKSHELL from your skin after about 20 minutes. Eye protection during application and clean up is highly recommended. Rust Bullet covers approximately 400 square feet per gallon/per coat depending on the method of application and the type and condition of the surface to be coated. It is critical that at least two coats of Rust Bullet be applied to achieve a dry film thickness of 6 mils (0.006 inches or 0.1524 millimeters). Additional coats may be required to obtain the recommended dry film thickness depending on the surface and method of application. For comparison purposes, 4 mils is approximately the thickness of one sheet of standard paper. It is particularly important that the first coat be generous enough to soak through the rust to the steel or iron underneath. A second coat of Rust Bullet must be applied to completely seal the first coat; this cannot be done with any other paint or coating material. BLACKSHELL will cover approximately 400 square feet per gallon with a one coat application (two coats are recommended when applying BLACKSHELL independently of Rust Bullet.). Optimum drying time between coats is approximately two (2) to four (4) hours for Rust Bullet, and six (6) to ten (10) hours for BLACKSHELL, depending on humidity levels. Applying Rust Bullet or BLACKSHELL in overly thick coats could cause small bubbles to form in the coating as it starts to cure; Carbon Dioxide gas is released during the curing process and may become trapped in an overly thick coat. Several thin coats applied in a crosshatch method (up and down, side to side) will produce the best results. When applying additional coats of Rust Bullet or BLACKSHELL the previous coat should not be wet or tacky; if you are unable to transfer the coating to a gloved finger then it is safe to apply an additional coat. If the application requires coating over existing paint or primers that can not be scraped off, it is very important to rough up the surface with 100 to 150 grit sand paper, sanding sponge or scuff pad prior to applying Rust Bullet or BLACKSHELL; this rule also applies to a previous coat of Rust Bullet if 72 hours have lapsed between additional coats or the application of a topcoat. For heavy industrial or marine applications, additional coats of Rust Bullet must be applied to achieve the required minimum dry film thickness (DFT) of 12 mils; an additional coat of BLACKSHELL is recommended for industrial, marine, or commercial top coat applications; any shortage of material may limit the coatings' effectiveness. For maximum rust prevention, ensure corners, edges, and heavily pitted areas are adequately coated. Rust Bullet requires no top coat; however, the final coat of Rust Bullet may be topcoated after 24 hours with BLACKSHELL or most conventional topcoat paints following the manufacturer's recommendations. Cure time varies based on relative humidity and temperature of the surface: Rust Bullet - 80% in 4 hours, BLACKSHELL - 80% in 10 hours, both coatings are fully cured in approximately 72 hours. When applying Rust Bullet, it is recommended that the air or surface temperature not be below 35°F (2°C) or above 110°F (43°C). Ideal application temperature is between 50°F (10°C) and 80°F (27°C) with humidity below 90% to ensure proper drying. Do not apply to surfaces when the existing temperature of the surface exceeds 150°F (66°C) or is below 32°F (0°C). After curing, Rust Bullet and BLACKSHELL have a service temperature range of 314°F (157°C) continuous, and can tolerate maximum temperatures between 617°- 662°F (325°- 350°C) for up to 72 hour periods. Immediately after use, spray equipment must be cleaned with Xylene or Toluene. WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

IMPORTANT: FAILURE TO FOLLOW STIRRING PROCEDURE BELOW MAY RESULT IN POOR COATING PERFORMANCE

Do not open and stir Rust Bullet or BLACKSHELL when the coating's temperature is below 32°F (0°C).

1. Rust Bullet and BLACKSHELL are single-component coatings that are easy to use; however, **BOTH Rust Bullet and BLACKSHELL MUST BE STIRRED THOROUGHLY BEFORE USING UNTIL COMPLETELY UNIFORM AND HOMOGENEOUS (approximately 3 minutes).** Avoid whipping air into product. DO NOT USE ELECTRIC OR MECHANICAL MIXING DEVICES THAT WILL WHIP AIR INTO THE PRODUCT. Shaking the container prior to application may cause the formation of bubbles in the finish of the coating.
2. Aged Rust Bullet or BLACKSHELL (six months or older) may develop settling. Follow the same process as in "STIRRING, #1" but increase the stir time.
3. Do not reduce or thin Rust Bullet or BLACKSHELL. Do not add other paints in an attempt to change the color of Rust Bullet. Because of the exacting chemical balance, thinning or altering will compromise the quality of the cured product. Rust Bullet® *Automotive* (Silver Label) is formulated slightly thinner than Rust Bullet (Gold Label) and can easily be sprayed through an HVLP, Automotive Finishing Gun.

EQUIPMENT SET-UP PROCEDURES

AIRLESS SPRAY: Rust Bullet®, (Gold Label), is supplied ready to stir and apply with airless spray systems.

1. Inspect all spray equipment and ensure it is clean and in good working order.

2. Flush Xylene or Toluene through your spray equipment (pump, line, and sprayer) to remove any existing moisture or alcohol from previous coatings or solvents.
Note: Do not re-circulate solvent through pump, as the solvent will be contaminated with moisture and debris. Draw solvent from one container and flush into another. Never allow old solvent in the coating lines to enter a Rust Bullet coating.
3. **Rust Bullet® (Gold Label)** is formulated to work well with Airless Spray Systems using a 517 to 523 tip, and an approximate 3000 psi.
4. Follow all stirring instructions as listed above under "STIRRING."
Note: Ensure that minimum cure times are followed for recoat. Published cure times (under normal weather conditions) are recommended per coat as specified on the data sheet. When excessive wet film is applied, additional cure time will be necessary.

CONVENTIONAL SPRAY: Procedures are the same as for airless spray. Use only **Xylene or Toluene** for flushing equipment prior to application and for clean up. If necessary, pour a small "float" of **Xylene or Toluene** on top of the coating in the paint pot prior to sealing. **(Use only as much as is needed to just cover the surface). Do not agitate in pressure pot. The float of solvent must not be mixed with the coating; its only purpose is to keep air from coming into contact with the coating in the paint pot for the duration of the application.** Use standard production type spray equipment. Air supply must have an effective moisture trap. Use air pressure at the gun of 40-60 pounds. We recommend straining through a nylon bag strainer.

HVLP SPRAY: **Rust Bullet® Automotive (Silver Label)** is formulated slightly thinner to flow smoothly through HVLP automotive finishing/primer guns and produces a finish comparable to Powder Coating. It is best to use a gravity feed HVLP, 40-60 pounds with a 1.7 to 2.0 tip. Three coats of **Rust Bullet® Automotive** should be sprayed two to three hours apart using the HVLP system to achieve the recommended dry film thickness. **BLACKSHELL** can be applied with either an airless spray system or HVLP. Note: When spray equipment is idle for more than 15 minutes, it is necessary to resume painting or flush with solvent. It may be necessary to lay tip of sprayer in solvent to keep from curing. **ROLLER OR BRUSH APPLICATION:** Use 1/4 to 3/8 inch nap synthetic fiber roller cover for most applications. Pay special attention when brush-applying **Rust Bullet** or **BLACKSHELL** to prevent brush stroke lines in the film. **Rust Bullet** coatings are self leveling. When spraying, rolling, or brushing it is important to keep a wet edge. **Rust Bullet** and **BLACKSHELL** should be applied evenly without buildup; use the crosshatch method whenever possible. Applying overly thick, uneven coats could produce small bubbles in the finished coating due to the carbon dioxide gas that is released as the coating cures. For more specific application information, please see our FAQ's.

PRODUCT STORAGE AND HANDLING

1. Care should be taken to ensure that new unopened containers or left-over partial containers are kept sealed. Heavy Duty Plastic Wrap can be placed over the top of the remaining coating with the excess plastic extending beyond the rim of the container. This will displace as much air as possible from the remaining coating and will help prevent the lid from permanently sealing closed.
2. **Rust Bullet** and **BLACKSHELL** are moisture sensitive. It is recommended to limit the time the container is opened. Transfer only the amount needed for the application of each coat. Immediately wipe clean any coating from the rim of the container and reseal. This should be done every time you use **Rust Bullet** or **BLACKSHELL** and in between coats. Never pour a **Rust Bullet** coating that has been exposed to air and moisture back into the container.
3. If a skin has formed in a new unopened container or a sealed container, remove by cutting edge of skin at the skin/container surface. Discard the skin properly. Stir until uniform, filter if necessary, and apply.
4. **Rust Bullet** coatings are packaged in unlined paint cans. If for any reason the coating is transferred to another container, clean, unlined, paint cans (or similar unlined metal containers) must be used.
5. Unopened cans have a shelf life of at least two years (previously opened cans: three to six months).

CLEAN-UP

1. Use Xylene or Toluene. Do not make assumptions about other cleanup solvents without consulting Rust Bullet Customer Support. Even a very small contamination of alcohol or other hydroxyl-containing solvents can destroy the moisture-cure reaction, partly or entirely, without any indication or jelling.
2. Always flush equipment clean. Do not leave residue as it will harden and become insoluble in solvent. Clean equipment as you would with any typical two component catalyzed coating. Always clean brush or roller thoroughly or throw them away after use. Dunking dirty equipment in solvent will not prevent the coating from curing. Avoid contact with skin or clothing. Use gloves, safety glasses, and other protective equipment. Any coating must be removed within 20 minutes or it will harden and become next to impossible to remove. After drying, **Rust Bullet** and **BLACKSHELL** can only be removed with rigorous abrasive action. **Rust Bullet** or **BLACKSHELL** that has dried on the skin will wear off in about a week.

FINAL POINTS TO REMEMBER

1. **Never allow rain, mist, sweat, or other contaminants to fall into an open can of Rust Bullet or BLACKSHELL;** a plastic or cardboard cover is always a good practice. **Never apply Rust Bullet or BLACKSHELL while raining or under threat of rain.**
2. When saving partial cans, lay a plastic sheet on the remaining material then reseal. If a skin forms on the surface of the material in the can, remove from the container and dispose of properly. Stir until uniform. Strain if necessary.
3. Do not open the can until you are ready to use it.
4. Never over stir, entrap, or whip air into the coating.
5. **For clean-up use only clean Xylene or Toluene.** Never allow lacquer thinner, vinyl thinner, epoxy solvent, or any alcohol or unapproved solvent to enter the coating. **Never neglect to purge all paint, moisture, and debris from equipment before spraying. Spray equipment must be cleaned immediately after use.**
6. Applying a topcoat over **Rust Bullet** is not necessary; if one is desired, please wait 24-48 hours after the application of the final coat of **Rust Bullet**. **BLACKSHELL** is designed as the optimal top coat for use with **Rust Bullet** providing the ultimate rust protection. **BLACKSHELL** can also be used as a stand alone rust preventative, high performance coating, providing excellent protection.

SAFETY CONSIDERATIONS

A certain degree of risk is involved in the use – or more properly, the misuse, of most industrial materials. **Rust Bullet** coatings are no exception to this rule. Ensure adequate ventilation and fresh air when working with **Rust Bullet** coatings. Use a NIOSH Approved Respirator with an 8051 Organic Vapor chemical cartridge and an R95 filter attached with a filter cover. The NIOSH requirement is that the cartridge be discarded at the end of a shift. Protective gloves and safety glasses must also be worn. Due to the superior adhesive properties of **Rust Bullet** coatings, we strongly recommend that protective clothing be worn including long sleeves and a spray sock. It is critical to avoid any conditions that may cause a fire. Avoid open flames, pilot lights, sparks, heating elements, cigarettes, or any and all possible sources of ignition. For more complete coverage of safety issues, see the MSDS sheets at www.RustBullet.com.