Machinist Mate Rust Freeze Directions - Now with improved curing!

NOTE: When using Rust Freeze it is important that you shake the contents well prior to mixing and apply in very thin coats of only a couple of thousands of an inch! Failure to shake may result in the Rust Freeze not hardening at all. Applying Rust Freeze too thick will not increase the level of corrosion protection, over use simply wastes the product. Mix only a small amount at a time. Until you are failure with the coverage characteristics of Rust Freeze we recommend you mix up no more than a teaspoon of each part (A and B) to experience how far the product will go. The product will go a very long way!

Directions:

SHAKE BOTH PART A AND PART B THROUGHLY PRIOR TO OPENING PART A OR B! Mix Part A and Part B in equal amounts. Brush, spray (use a respirator if spraying), wipe, dip or roll on. Apply Rust Freeze as thin as possible! ***NOTE: APPLY AS THIN AS POSSIBLE!*** Rust freeze will provide protection with one thin coat. If you want higher protection, then apply a second thin coat. Thin coats will give you a matt finish. If you want a shiny smooth finish, Apply one or more thick coats of Rust freeze.

NOTE: Rust Freeze is a very slow curing product when left to cure naturally! Cure time is +/- 14 days at 90 degrees F - longer in cooler temperatures. It is recommended to apply a second coat after the first becomes hard enough to touch without Rust Freeze sticking to your finger. NOTE: The second coat will have more coverage than the first – **apply as thin as possible!**

To speed curing: - using plastic. KEEP DRY!

Rust Freeze must stay dry (do not let get wet with rain or sprinkler etc.) while curing. To facilitate curing speed without using heat and to keep Rust freeze dry, cover the area or pieces treated with plastic without the plastic touching the Rust Freeze. If possible place in the sun as the suns energy will significantly raise the temperature under the plastic causing Rust Freeze to cure much faster.

To speed curing: - using an oven or heat gun.

There are multiple ways to cure Rust Freeze using heat. Below is an outline of recommendations. NOTE, experiment with your application and equipment to determine the best way to meet your needs. **NOTE it is recommended you DO NOT use your household oven to cure Rust Freeze! Rust Freeze produces a strong smell when heated during curing.**

1. Two coat method: heat the surface after applying Rust Freeze to between 200 to 300 degrees F and let cool to ambient, it will be tacky. Apply another thin coat and reheat to 200 degrees F let cool. Total processing and cure time for two coats will be approx. 3 hours total. NOTE: if you want a smooth shiny surface then you will apply the second coat thicker and let cure using an oven or naturally. If you use a heat gun the force of the air will blow Rust Freeze around and make it run off the surface leaving a very thin coat that is not shiny.
2. Higher temperature cure: Rust Freeze can be cured rapidly in an oven or using a consistent heat source such as a heat gun. Cure times can be reduced to as little as 15 minutes. NOTE: if you want a second coat do not cure the first coat at high temperature or to a hard state, cure to a tacky state. To apply a second coat, cure using step #1 (two coat method) for the first coat, once the first coat cools, apply the second coat and then use the high temperature method below to rapidly finish curing.

   Single coast application. Apply one coat that is the thickness you desire. If you want a smooth shiny surface, apply a bit thicker or apply two coats. Keep in mind that Rust Freeze is very thin and will run on vertical surfaces making a thin coat on its own. Too heavy a coat will result in product waste.
   Approximate curing times: NOTE in order to achieve cure in the time period shown you must keep the part and rust freeze within the temperature range indicated during the entire curing time you have chosen: Your results may vary - all temperatures in Fahrenheit. NOTE: do not exceed 420 degrees Fahrenheit.

   375 to 400 degrees - 2 to 4 minutes
   350 to 375 degrees - 4 to 6 minutes
   325 to 350 degrees - 6 to 8 minutes
   300 to 325 degrees - 8 to 10 minutes
   275 to 300 degrees - 10 to 12minutes
   250 to 275 degrees -12 to 15 minutes
   225 to 250 degrees - 15 to 40 minutes
   150 to 225 degrees – 40 minutes to 2days
   120 to 150 degrees – 2 days to 6 days
   80 to 120 degrees- 6 to 21 days

   Below 80 degrees - not recommended to attempt to cure without heat.
   NOTE: when curing using heat Rust Freeze will get thinner. As the temperature rises Rust Freeze will run and seep into the metal and other places like seams, cracks etc. If using a heat gun keep the air flow at the lowest setting as the air will blow Rust Freeze around and off the part. It is important to understand that once the part is heated using a heat gun or other source of heat and the heat is taken away Rust Freeze may be tacky and will cure as it cools back to ambient over time. Cure time to a hard surface will depend on how warm you got it and how long the heat was applied. Typically, at temperatures above 300 degrees Rust

Freeze will cure hard if you hold the heat for the full time. Below 300 degrees you may need to remove the heat once you reach the recommended cure time and Rust Freeze will harden as it cools back to ambient.

NOTE: if you want to apply additional coats, do not leave the heat on for the full time or cure so Rust Freeze is hard to the touch. Instead cure to tacky where the product is starting to harden but will not stick to your finger or other instrument then apply the next coat.

NOTE: RUST FREEZE MUST BE AGGITATED WELL BEFORE MIXING PARTS A AND B TOGHTHER! SHAKE BOTH PARTS A AND B THOROUGHLY OR RUST FREEZE WILL NOT CURE AT ALL!

NOTE: DO NOT APPLY THICK COATS! Use a brush to spread thinly over the surface or spray on with a very thin coat. If surface is heavily corroded rust freeze will seek out the rust and draw itself into the crevices and cracks penetrating down to the base metal. Rust Freeze is so effective in seeking out rust and corrosion that it will travel remarkably long distances encasing the corrosion – sometimes traveling several inches on its own!

Prepare the surface by removing all debris, loose scale, loose paint, or strip the area complete of paint and rust if desired. Apply a small amount of Rust Freeze covering the entire surface with a very thin coat. You can apply to the painted areas if desired to seal over the paint for added protection.

For areas like fenders where there are braces that you cannot reach behind and folded seams on body sheet metal where corrosion is a problem or already started apply Rust Freeze to the area and dab on a bit extra around these areas and prop up if possible to allow Rust Freeze to migrate down into the area desired to coat. Rust Freeze will seek out rust and provide coverage into cracks, crevices and seams on its own. For large areas where a brace or other obstacle is in the way and you cannot get Rust Freeze on the surface with a paint brush or other means, apply to the exposed area with a bit extra along edges. Pitch the item being protected to allow Rust Freeze to seep its way in behind the brace etc. Do not pour the product on as this will result in waste and over use of the product. Take your time and be patient. Rust Freeze will seep in and creep along the metal on its own over a period of about 20 minutes to several hours. Check for areas not covered and apply as needed. If using a heat gun this process will be much faster and you will see it seep in.

KEEP IN MIND THAT A LITTLE GOES A VERY LONG WAY! Typically we recommend mixing up no more than a few teaspoons of parts A and B at a time. As an example, a full size automobile fender, bare metal with little or no corrosion should only use about 6 (3 part A and 3 part B) to 10 teaspoons to cover the entire surface of the inside of the fender! Spread the product out and when you think it is thin then spread it out more! After it cures so you can touch it without it transferring to your finger then apply a second very thin coat!

Rust Freeze can be applied over paint and onto rusted surfaces. Simply wire brush the rusted surfaces loosening and removing as much of the loose paint and rust as possible then apply Rust Freeze in the thinnest coat possible. Do not heat Rust Freeze if it is over paint as the paint will not take the heat!

For exterior applications or applications where the metal is cool or cold – below 80 degrees F. We recommend you warm the metal prior to applying Rust Freeze and then use the heat cure method above to finish the curing process rather than leave to cure naturally. In temperatures below about 80d degrees Rust Freeze may not cure.

NOTE: keep Rust Freeze away from rain and water while it is curing. If exposed to rain it may wash off.

When treating things like rebar in concrete where cracks have appeared in the concrete but the rebar is not exposed visually. Drill a small hole above the area to be treated down to the rebar then mix up a small amount of Rust Freeze and using an industrial syringe (available at machinistmate.com or rustfreeze.com) inject Rust Freeze into the small drilled hole. Rust Freeze will seep its way around the Rebar where it is exposed and prevent further corrosion. Keep dry during the curing process by covering with plastic.

CAUTION: KEEP OUT OF THE REACH OF CHILDEREN! WEAR APPROPRATE PROTECTIVE EQUIPMENT SUCH AS GLOVES AND SAFTEY GLASSES AND A RESPERATOR WHEN SPRAYING. USE ONLY IN A WELL VENTILATED AREA. In the case of contact with eyes, flush eyes with water for 15 minutes and contact a physician. In case of ingestion contact medical personnel immediately.

IF YOU HAVE QUESTIONS PLEASE CALL 217 433 1394 or 217 433 4972 or 217 737 0424

KEEP OUT OF THE REACH OF CHILDEREN!

Medical Emergency - Contact Infotrac at 800 536 5053

Distributed by:
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