

APPLICATION INSTRUCTIONS FOR MASCOAT INDUSTRIAL

Mascoat Industrial must be mixed and applied properly to achieve all of its insulating capabilities. All application instructions are detailed on each pail. Please use these instructions to help guide you through your application.

Before the application of Mascoat Industrial, it is vital that the surface temperature of the substrate be at least 60°F (16°C). Since the resin system is a thermal-set acrylic, it will not catalyze until the temperature is above 60°F (16°C). Lower ambient temperatures may be present, however, the surface temperature must remain above the minimum recommended temperature.

In colder climates, or if the product is stored for prolonged periods under 50°F (10°C), there may be advanced separation of the product. It is important that all containers of Mascoat Industrial are thoroughly mixed prior to application to ensure proper bonding and performance.

NOTE: Brush and/or roller application is **NOT RECOMMENDED** using this product. An airless sprayer is the best method of application. Please see the "Recommended Equipment Guidelines" document for more information.

SURFACE PREPARATION FOR METAL APPLICATIONS

Galvanized Steel, Stainless and Aluminum Substrates

- If surface is new galvanized, stainless, or aluminum metal, a solvent wipe is the minimum requirement prior to application of Mascoat Industrial. This is to ensure that all oils and protective compounds are removed from the surface.
- If the surface is older galvanized, stainless, or aluminum metal and/or passivation layer is present, a brush off blast is recommended prior to the application of Mascoat Industrial.
- Make sure that all degraded substrates are either repaired or replaced prior to the application of the coating.
- On some surfaces, light sanding can be done to give added tooth for product adhesion.
- If necessary, spray a small sample area and allow to cure. An X-cut test can then be performed to assess the adhesion quality (ASTM-D3359).

Preparation for Bare Steel Substrates

1. We recommend a primer system. Primers can vary depending on the environments that the substrate will be subjected to. Mascoat recommends using a primer system that will be capable to at least 20% higher temperature than the surfaces peak temperature.

2. Follow the directions for surface preparation for the primer. Spray the primer system on all areas of the steel.
3. Make sure that all areas of the steel, including welds and touch up areas, have been coated with the primer. Follow primer recommendations for topcoating.
4. Mascoat Industrial can be sprayed directly on top of the primer without any other prep. If there is a large delay between applying the primer and the Mascoat Industrial application, make sure that the area is clean and free of any foreign matter. This can be accomplished by wiping the surface down with a rag, pressure wash, or air sweep.

It is extremely important to make sure that after cleaning, the substrate is completely dry before applying Mascoat Industrial. Since the coating is water-based, all water must be evaporated from substrate for good adhesion properties.

SURFACE PREPARATION FOR FIBERGLASS APPLICATIONS

1. Use 80 grit sandpaper to sand down the fiberglass, leaving no sheen or shine on the surface. This allows for the fiberglass to have a surface profile, which is required for the coating to adhere correctly.
2. After sanding, wash surface with soap and water to ensure that all residual fiberglass powder is removed from the surface.
3. Allow the surface to completely dry before application of coating. Since the coating is water based, all water must be evaporated from substrate for good adhesion properties.
4. Apply a 10-mil tack coat of the coating to the surface and allow to completely cure. Then proceed with 20-mil coats until desired thickness is achieved.

SPRAY APPLICATION INSTRUCTIONS

Equipment Needed For Spray Application

- Use only an airless spray system with a minimum 1.5 gallon per minute product delivery rate at 3000 psi. Minimum recommended sprayer: Graco NXT 33:1 or equivalent (minimum output per cycle 180cc). Make sure equipment is in good working condition prior to spraying. If seals are old or worn, replace prior to spraying Mascoat Industrial
- 3/8" spray hose line
- Reversible nozzle with tip size .015" - .025". Tip size depends on area to be sprayed. For small areas, smaller fan sizes should be used. For larger areas, a 519 - 523 works well
- Use a Graco Contractor, FTX or equivalent. Do not use a Graco Silver Gun, as this will restrict the flow rate of the coating
- Respirator or dust mask and paint suit or similar clothing are recommended.
- 3' length 1/4" whip
- 1/2" drill motor with reverse setting
- 1/2" sheet rock mud-mixing paddle (blade style). Supplied with each shipment.

- Pail opener and/or knife
- Hopper or other 5 gallon pail
- Access to water

If equipment is not readily available, please contact Mascoat. We stock many of the items that are designed for Mascoat Industrial application. Mascoat also manufactures a Small Application Sprayer (SA Gun) specifically designed for areas under 100 ft² (10 m²). This sprayer can be used with conventional air hose (3/8”).

Please follow these directions closely. Failure to apply our coatings in conformance to these instructions will cause you time and application delays. If you have any questions or need assistance, please contact a Mascoat representative.

Directions for Spray Application of Mascoat Industrial

1. **Upon receiving Mascoat Industrial, please inspect physical appearance of container.** Make sure that product is free of any punctures or tears. If punctures exist, please contact shipper or Mascoat.
2. **Open container with pail opener or other means.**
3. **Separation of this coating is natural due to its high loading of insulating particles.** Use the mud-mixing paddle provided, or obtain one from a home improvement store. (Colder environments will make coating cause more separation and will need more stirring than hotter environments.) See our website for more details.
4. **Place feet on sides of pail to hold pail from spinning. Slowly turn drill motor on reverse setting only.** Reverse setting will ensure that paddle will not scrape sides of pail and contaminate contents or cause tip clogging. Stir product until it resembles a milkshake-like consistency (20 - 40 seconds) total in ambient conditions of 70°F (21°C) or greater. Over-mixing (more than 5 minutes or in ambient conditions of 70°F (21°C)) may destroy particles, thereby reducing insulating capabilities. Product should be free from any large particles. (Turning pails upside down 8 hours prior to application will make mixing easier.)
5. **Remove all filters from the spray gun and sprayer.** This is very important to make sure that insulation is not filtered.
6. **Flush all solvents from sprayer with water.** Prime sprayer using water only with either gun removed from line or with orifice nozzle out of the spray gun. Flush 10 - 15 gallons of fresh water through the sprayer to ensure removal of all thinners or debris. Mascoat Industrial’s consistency requires peak performance of the seals in the pump unit. If seals are weakened or have developed small cracks, proper pressure is hard to achieve.
7. **Place pickup nozzle in product pail or hopper and prime product through sprayer.** Prime without gun or orifice nozzle. When product consistency is thick, stop sprayer and attach gun or orifice nozzle. This may take a moment, as the system will have to bleed until pressure is reduced. Place tip guard on gun and insert reversible tip. Product is now ready for application to substrate. Slight tip clogging may be more common initially as the product will have a tendency to clean the sprayer internals. If older lines are being used, tip clogging may last longer. It is recommended to dedicate lines specifically for Mascoat Industrial.

8. **Use sample area to adjust sprayer pressure.** With most large pneumatic sprayers, air pressure of 80 - 100 PSI is adequate if CFM is consistent. If CFM is reduced more pressure will be needed. Make sure to set pressure only high enough to stop fingering or keep pressure consistent. If pressure is not consistent, either there is a volume problem with the pump or not enough air supplied to the sprayer. It may take a minute to get the pressure right and achieve the correct spraying consistency. Make sure that the unit also has sufficient air flow so it does not starve the unit for power.
9. **Spray product onto substrate in a methodical fashion.** Remember that this is a coating, not paint. It is very important to ensure an even coat throughout substrate.
10. **Drying times will be extended with high humidity or if colder conditions exist.** Coating may be applied up to max of 20 - 24 wet mil (0.5 mm) layers. Normal coat thickness is 20 mils (0.5 mm) per application. **(Note: Mascoat Industrial-AC requires a 10 - 12 mil initial tack coat.)** Usually four to six passes equals one full coat. In colder conditions, application of heat and/or forced ventilation will be necessary to ensure even coat thickness and alleviating risk of slides. Confined spaces will need forced ventilation in all applications to keep humidity levels from rising due to water evaporation. For vertical surfaces, a light tack coat of 8 - 10 mils (0.23 - 0.25 mm) is recommended insuring proper hang. Use a wet mil gauge when applying the coating to ensure proper thickness.
11. **For cold weather installation, lighter passes of 8 - 10 mils (0.23 - 0.25 mm) will expedite dry times.** This will also ensure a nice even coating. With less wet film thickness, the coating will dry faster. To test for proper dryness, place your thumb onto the test area of the coating and press down. Turn your thumb 90° and remove. If coating is left on your thumb, the coating is not fully dry. Make sure coating is completely dry before applying subsequent coats.
12. **Coating should be measured with a dry mil gauge after each coat to ensure proper thickness.** Dry times will depend on temperature and humidity.
13. **Cleanup requires only water. Solvent cleaning is not recommended.**

First Aid

- If exposed to eyes: Flush eyes with clean water.
- Skin contact: Wash with soap and water. If redness persists, seek medical attention.

Caution

Proper OSHA approved respirators and goggles are recommended for your protection when using this product. Use only with adequate ventilation. When applying in a confined area, open doors and windows or use other means to ensure fresh air circulation or forced ventilation during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear respiratory equipment.

Tips and Techniques for Application of Mascoat Industrial

- Tape up all areas that are NOT to be covered.

- Turn pails upside down 8 hours prior to application. This will allow coating to become softer and easier to mix.
- Make sure that airless sprayer has a good seal kit. Mascoat Industrial can wear on seals since it contains semi-abrasive particles. This can scrub seals clean and trap any particles stuck on seals in the system. Therefore, if you have used your sprayer with solvent-based systems, we recommend a fresh seal kit prior to use of our product. Use leather seals if possible.
- Make sure to purge airless sprayer with plenty of water and recirculate for some time prior to placing pickup nozzle into product. We recommend flushing system with at least 15 - 20 gallons of water prior to any application. Pull orifice nozzle out of gun or remove gun to bleed any trash or unwanted items.
- Prime sprayer with product by removing spray nozzle orifice to ensure that all trash is removed from system. This is especially important if sprayer is used often and lines are not new.
- Use ventilation fans to help evaporate moisture when spraying the coating inside confined areas. It is important to push air as well as remove it in confined areas, as humidity will increase as the coating dries. This rise in humidity will lengthen the dry time. Air movement will aid in drying the coating.
- Spray a light 5 - 10 mil (0.25 mm) tack coat initially of product and let it dry. This will help to deter sliding of product due to excessive milage initially. This will also expedite dry times.
- Spray multiple light coats (10 - 12 mils) as opposed to one thick coat (24 mils) in colder conditions.
- Work smart and think out strategy prior to spraying. Spray areas that are hard to reach prior to bulk of application.
- If product is applied onto an unintended surface, clean immediately via water and scrubbing.
- If product slides or blobs occur, let dry thoroughly prior to scraping.
- If spraying more than one coat, tinting can be used to differentiate coats. Standard acrylic tint can be used or consult Mascoat about color formulations.

Hopper System

A hopper system can be an effective tool when spraying large amounts of the coating. A 20 - 30 gallon container is perfect for mixing and containing the product. The best system is to mix each pail, then pour the mixed coating into the hopper.

Place the pickup nozzle for the sprayer at one end of the container and periodically stir the hopper with the mud-mixing paddle. This system will allow the sprayer to have consistent product throughout the application.

Standards and Practices for Tinting:

- Apply Mascoat Industrial white for the first coat. Tint final top color.
- For gray color - Use approx 1 ounce of black tint for one five-gallon pail. If the desired color is to be darker gray, then add more tint. Be sure to measure how much tint is added and then use this same amount on additional pails. There is a point in which the coating will not achieve any darker appearance and you are just wasting tint.

- If tinting, it is best to pour tint into premixed pail.
- Be sure to agitate briefly to mix tint into Mascoat Industrial.
- Using a hopper will make for a more uniform color.
- Pour tinted container into hopper until approximately 3 five-gallon pails worth of material are in hopper. Agitate hopper with paddle. This will blend the color to give an even shade of gray. It is also easier to spray out of this hopper system than if mixing and spraying out of five-gallon pails.

Standards and Practices for Topcoating Mascoat Industrial

- With topcoating, it is vital to check with a Mascoat representative to ensure the topcoat is compatible. Topcoats may affect the performance of insulation qualities and normal procedure is to add an additional coat of the coating prior to using a topcoat.
- Make sure that Mascoat Industrial has fully cured prior to any topcoat. This will ensure that the coating has fully dried and will not affect any topcoat.
- Since Mascoat Industrial has a slight porous profile, no other prep is needed. The topcoat can be sprayed directly onto Mascoat Industrial. The substrate needs to be free of dirt, dust and grime prior to the application. This can be accomplished by a light air sweep.
- **If in harsh conditions – Mascoat Industrial can be top coated. It is recommended that an acrylic topcoat be used over Mascoat Industrial if not used in caustic environments.** This system is similar in physical characteristics as Mascoat Industrial and if used properly, should give lasting results. Mascoat Industrial has been top coated with other coatings such as epoxies, urethanes, and zinc based products. To date, we have not found any compatibility problems. Make sure that no accelerator products are used in conjunction with plural component systems.