

EXOAIR FLUIDS, TREMPROOF 260, AND RESIDENTIAL SPRAYING GUIDE

INTRODUCTION

The following information will address standard pump recommendations, application techniques, tip size, trouble shooting, and clean up for the Tremco ExoAir® Fluid Applied Membranes, TREMProof® 260, and Tremco Residential Waterproofings. The information contained in this Technical Bulletin was generated with the help of the following guide:

THE BASICS OF AIRLESS SPRAYING:

<https://www.graco.com/content/dam/graco/ced/literature/misc/321132/321132EN-H.pdf>

CHOOSING THE RIGHT PUMP

Tremco has partnered with Spray Equipment out of Wichita, Kansas to service our customers spray equipment needs. Our products require a pump that can handle a maximum psi of 3300 and through put of 2 gallons per minute. Spray Equipment knows the Tremco fluid applied products and can help you determine which pump will best suit your application needs. Spray Equipment can also suggest how to modify an existing pump to spray Tremco fluid applied products.

PUMP	EXOAIR 120SP	EXOAIR 120R/220	EXOAIR 130/230	TREMPROOF 260	ENVIRO-DRI	TUFF-N-DRI / WATCHDOG / TREMPRO 160
GH733	√	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√	√	√
GH833	√	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√	√	√
Spray Hog	√	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√ (1:1 Transfer pump is required) Both 5 gal and 55 gals	√	√	√
Ultra Max II 1095		√ - 5 gal only	√ - 5 gal only			
Ultra Max II 1595		√ - 5 gal only	√ - 5 gal only			
GMAX II 5900		√ - 5 gal only	√ - 5 gal only			
GMAX 7900		√ - 5 gal only	√ - 5 gal only			
IronMan 500 (gas only)		√ - 5 gal only	√ - 5 gal only			

PUMP & SPRAYERS FAQ

Should I buy a large sprayer or a smaller sprayer?

The smaller units can only spray out of the 5-gallon pails of material where the larger sprayers can spray out of both the 55-gallon drums and the 5 gallon pails of material. Spray Equipment will help you answer your questions regarding equipment purchasing.

What fluid is stored inside a new pump prior to it being used for the first time & how should it be flushed?

Generally, brand new pumps are stored with hydraulic oil in them. This oil needs to be completely flushed from the pump prior to using it with any Tremco fluid applied products. The hydraulic oil can be flushed using a ratio of Dawn Dish Detergent and water (1:4). The flushing should be done by using the recirculating line and not the spray hoses themselves – just place the prime tube in a trash bucket. If the hydraulic oil is not properly flushed it could cause the Tremco fluid applied products to get gummy inside the lines and the pumps.

Can you spray the ExoAir 120R – roller grade material?

Yes, the ExoAir 120R can be sprayed with all the equipment listed in the table above except you will need to add a 1:1 transfer pump to your equipment list for the larger pumps

CO-SPRAYING

ExoAir 120SP/R, TREMproof 260, Tuff-N-Dri, and Watchdog can be co-sprayed. These fluids require an accelerant that is mixed with water for co-spraying. The accelerant is a calcium chloride (CaCl₂) (2%) and water (98%) solution. The accelerant is mixed at a 1:5 ratio (1-part accelerant to 5 parts of ExoAir 120, TREMproof 260, Tuff-N-Dri, or Watchdog) at the spray nozzle. The accelerant solution can be prepared by mixing 77% CaCl₂ flakes with water as follows: 16.6 oz (~500g) of 77% CaCl₂ flakes per 5 gallons of water. An increase in concentration of the CaCl₂ is not recommended as the products could cure too quickly prior to bonding to the substrate.

It is extremely important when co-spraying to begin the work from the bottom up as the co-spray process causes the membrane to weep. When co-spraying the trigger of the gun must be fully engaged for both the emulsion and the co-spray to spray continuously and completely. Donec laoreet nonummy augue.

CO-SPRAYING FAQ

Can I use a Hudson Sprayer to mist the surface of the ExoAir 120, TREMproof 260, Tuff-N-Dri, or Watchdog with the co-spray accelerant?

Yes, you can use a Hudson Sprayer to mist the surface. This will have a similar effect on the membranes as co-spraying but just not as dramatic or instantaneous. When co-spraying you are accelerating the emulsion as it is atomized and contacting the substrate. When you are misting the surface of the membrane with the CaCl₂ solution you are accelerating the surface cure of the membrane only. It is extremely important to mist the surface at low pressures because spraying the CaCl₂ at a higher pressure could cause sagging or displacement of the membrane.

Where can I purchase the 77% CaCl₂ flakes that are required when co-spraying?

The flakes can be purchased online at Gempler's. Flakes are preferred instead of pellets as the flakes dissolve easier in water than the pellets do.

SPRAYING

Tremco's fluid applied products should be sprayed at the proper thickness, pressure, and utilizing the proper tip size. The proper thickness of the products is listed in the table below:

TREMCO PRODUCT	EXOAIR 120 SP/R	EXOAIR 220	EXOAIR 130	EXOAIR 230	TREMPROOF 260	ENVIRO-DRI	TUFF-N-DRI /WATCHDOG / TREMPRO 160
MIL THICKNESS (wet/Dry)	60/38	60/36	70/40	*70/35 **48/25	95/60	12-15/10	60/40

*Porous substrates (Concrete, CMU, etc.)

**Only Exterior Glass-Mat Sheathing or ICF

Proper mil thickness can be achieved by spraying in one lift or two. Temperature of both the material and the substrate may limit the mil thickness you are able to achieve without causing sag. It is recommended to spray an area to test for sag. This can be achieved by spraying to the required full mil thickness and then striking a straight line horizontally through the wet material. Wait about 20-30 minutes. If the line that was struck has sagged, repeat the test with half the required mil thickness.

To spray the membranes in one lift you must also adjust the speed at which you are moving the spray gun. The slower you move the gun the more mil thickness you can achieve. Each lift will require several passes to achieve the proper thickness. It is recommended to spray a 4ft² area from left to right and then from top to bottom in a crosshatch pattern to achieve optimal coverage.

The fluids should be checked with a wet mil gauge often to ensure the proper mil thickness and coverage.

The pressure of the equipment will also affect the spray pattern. The lowest pressure that completely atomizes the membrane is suggested. Start at the lowest pressure setting and increase it slowly until the product is properly atomized. If the spray pattern finger or tails, then the pressure should be increased.

TIP SIZE

Each spray tip has a 3-digit number which indicates the size. The first digit, when doubled, is the spray pattern fan width in inches. A 517 tip (pictured above) has a 10" fan width when sprayed 12" from the substrate. The last two digits are orifice size in the thousandths of an inch. A 517 tip has a 0.017-inch orifice.



There is a range of tip sizes that are acceptable when spraying Tremco's fluid applied products. The following table lists the tip sizes recommended for each product:

TREMCO PRODUCT	EXOAIR 120 SP	EXOAIR 120R	EXOAIR 220	EXOAIR 130/230	TREMPROOF 260	ENVIRO-DRI	TUFF-N-DRI/WATCHDOG	TREMPRO 160
TIP SIZE (emulsion/co-spray)	539/627	535-539/627	527-539/NA	527-539/NA	539/627	525 or 527 /NA	535/637 or 539/627	535 or 539/NA

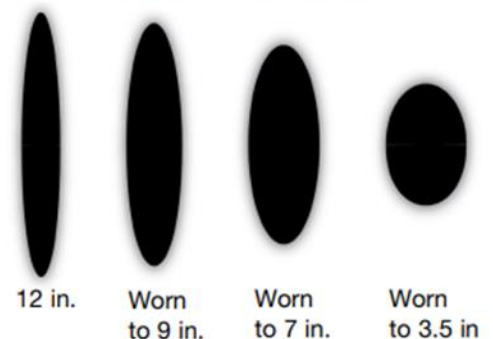
The viscosity of the product will affect the tip size selected and the viscosity of the product will increase as the product is stored in cooler temperatures. However, Tremco's fluid applied products should never allowed to freeze. The smaller the last two digits (the orifice) the better the thicker and more viscous product will spray. Always have a variety of tip sizes available to achieve optimum spray pattern. If the product is spraying and causing crater in the fluid, switching tips will help address that.

TIP SIZE FAQ

How do I know if the spray pattern is correct or if I need to replace a tip?

All spray tips will wear with normal use. when a tip wears, the size of the orifice increases, and the fan width decreases. Tip wear affects the spray pattern. If the fan has lost 25% of its original size, then it should be replaced. Continuing to spray would simply result in a poor-quality spray job, and a substantial waster of membrane and labor. Spray the membrane 12" from the substrate and evaluate the spray pattern to see if the pattern is consistent and has the fan pattern acceptable for that specific tip size. Remember, as stated above, the first digit of the tip multiplied by 2 will give you the fan pattern that should be demonstrated 12" from the substrate. For example, when a tip that had a 12" fan pattern is reduced to a 9" fan when worn, it will output 40% more membrane on 25% less area. The illustration below shows the effects of a worn tip on a spray pattern. Optimal coverage will be achieved with the proper tip size.

Spray Pattern Width



CLEAN UP

The spray equipment should be flushed with a solution of Dawn Dish Detergent and warm water. The spray equipment should be flushed until the membrane is completely flushed and the pump discharge is clear. This should be done when switching from Tremco fluid applied product to another.

Citrus cleaner can also be used to flush the equipment when using ExoAir 220 and 230 ONLY. Citrus cleaner should never be used to flush ExoAir 120, TREMproof 260, Tuff-N-Dri, Watchdog, or TremPro 160.

Never use Mineral Spirits to flush the pump as it could cause Tremco's fluid applied products to solidify.

Never use Xylene to flush the pump as it could damage the spray lines and seals.

The tips and spray guards should be removed and cleaned with xylene or Dawn Dish Detergent and warm water and brushed lightly with a small brush at the end of each day's work. Do not store the tip and guards in solvent as the solvents will adversely affect the seals of the tips and guards. The tips and guards may be stored in the Dawn/water solution overnight.

CLEAN UP FAQ

How often should I flush the pump?

According to Spray Equipment, the pump does not need to be flushed every night if you are planning on using it within the next couple of days. Some contractors do not flush the product out of their spray rigs while they are on a project. Once the project is complete, they will then flush and clean out their pumps. It is important to protect the Tremco fluid applied products from exposure to the air during the storage process as they will develop a skin on the surface. If spraying out of 5-gallon buckets, protect the surface of the membrane by cutting an "X" in the lid and placing the immersion tube through the "X" to access the product. Wrap this area with damp towels to make sure that additional air doesn't get into the 5-gallon pail.

If I am not going to use the pump right away after the completion of a project, what fluid should I have in the lines during storage?

It is ok to store the pump with soapy water (Dawn Dish Detergent and water) for about 30-60 days. During this storage time, be sure to not let the lines be exposed to freezing temperatures as the soapy solution could freeze. If freezing is an issue and you want to store it for longer than 60 days, then it is also acceptable to store the pump with a 50/50 solution of water and antifreeze. It is also acceptable to store the pump for longer periods of time diesel fuel in the lines. This should not be diluted.

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