

Technical Service Bulletin

ExoAir Fluids & TREMproof 260 Spraying Guide

The following information will address standard pump recommendations, application techniques, tip size, trouble shooting, and clean up. The information contained in this Technical Bulletin was generated with the help of the following guide:

The Primer: An Overview of Airless Sprayers

[http://wwwd.graco.com/Distributors/DLibrary.nsf/Files/321132D/\\$file/321132D.pdf](http://wwwd.graco.com/Distributors/DLibrary.nsf/Files/321132D/$file/321132D.pdf)

- How to choose the pump that is right for your project?** *Tremco has partnered with Spray Equipment out of Wichita, Kansas in order to service our customers spray equipment needs. Generally speaking 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 in order to spray Tremco fluid applied products. A pump flyer can be found online at the following address:*

http://www.tremcosealants.com/fileshare/commercial_docs/PumpInformationEquipmentList.pdf

PUMP	EXOAIR 120SP	EXOAIR 120R	EXOAIR 220	EXOAIR 230	TREMPROOF 260
GH733	√	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√
GH833	√	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√
Spray Hog	√	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√ (1:1 Transfer pump is required) Both 5 gal & 55 gal	√
Ultra Max II 1095		√ - 5 gal only	√ - 5 gal only	√ - 5 gal only	
Ultra Max II 1595		√ - 5 gal only	√ - 5 gal only	√ - 5 gal only	
GMAX II 5900		√ - 5 gal only	√ - 5 gal only	√ - 5 gal only	
GMAX II 7900		√ - 5 gal only	√ - 5 gal only	√ - 5 gal only	
IronMan 500 (gas only)		√ - 5 gal only	√ - 5 gal only	√ - 5 gal only	

- **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 answer your questions in regards to 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 ExoAir/TREMproof fluid. 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 ExoAir/TREMproof fluids to get gummy inside the lines and pump.
- **Can you spray the ExoAir 120R – roller grade material?** *Yes, the ExoAir 120R can be sprayed with all the equipment listed in the pump flyer except you will need to add a 1:1 transfer pump to your equipment list for the larger pumps.*
- **Can you co-spray any of the Tremco fluid applied membranes?** *Yes, **TREMproof 260 and ExoAir 120SP/R** can be co-sprayed. These fluids require an accelerant that is mixed with water for co-spraying. The accelerant is calcium chloride (CaCl₂) (2%) and water (98%) solution. The accelerant is mixed at a 1 to 5 ratio (1 part accelerant to 5 parts of TREMproof 260 or ExoAir 120) 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. The co-spray only accelerates the cure of the products, but is not required to cure the membrane. An increase in concentration of the CaCl₂ is not recommended as the products could cure too quickly prior to bonding to the substrate.*

ExoAir 220 and ExoAir 230 can not be co-sprayed using the calcium chloride solution.

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 in order for both the emulsion and the co-spray to spray continuously and completely.

- **Can I use a Hudson Sprayer to mist the surface of the ExoAir 120SP/R or TREMproof 260 with the co-spray accelerant?** *Yes, you can use a Hudson Sprayer to mist the surface. This will have a similar affect 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 making contact with 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 of the membrane.*
- **Where can I purchase the 77% CaCl₂ flakes that are required when co-spraying TREMproof 260 and ExoAir 120SP/R?** *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. The following link will take you to the appropriate page.

<http://www.gemplers.com/product/CACL2/50-lb-poly-bag-Calcium-Chloride-Flakes>

- **How do I spray the Tremco fluids in order to get proper coverage?** *The ExoAir Fluids and TREMproof 260 should be sprayed at the proper thickness, pressure and utilizing the proper tip size. Tip size will be addressed in the next question. The proper thickness of the products is listed in the table below.*

TREMCO PRODUCT	EXOAIR 120SP/R	EXOAIR 220	EXOAIR 230	TREMPROOF 260
Mil Thickness (wet/dry)	60/40	70/40	70/35	90/60

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 with out 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 stays straight then you can spray that amount with out causing sag. If the struck line has sagged, repeat the test with half the required mil thickness.

In order 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 are able to achieve. The ExoAir 120SP and TREMproof 260 are recommended to be co-sprayed in order to build the appropriate wet mils in one lift. 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 cross hatch pattern to achieve optimal coverage.

The fluids should be gauged with a wet mil gauge often in order 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 fingers or tails, then the pressure should be increased.

- **What tip size is required to spray the TREMproof and ExoAir products?**



Breaking the code of the tip size:

517

First digit (5) when doubled, is the spray pattern fan width. A 517 has a 10" fan width when sprayed 12" from the substrate.

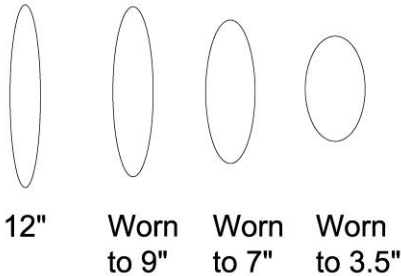
Last two digits are orifice size in the thousandths of an inch, a 517 has a 0.017 inch orifice

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

TREMCO PRODUCT	EXOAIR 120SP	EXOAIR 120R	EXOAIR 220	EXOAIR 230	TREMPROOF 260
TIP SIZE (emulsion/co-spray)	539/627	535-539/627	527-539/NA	527-539/NA	539/627

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 the TREMproof 260 and ExoAir fluids should never be allowed to freeze. The smaller the last two digits (the orifice) the better the thicker more viscous product will spray. Always have a variety of tip sizes available in order to achieve optimum spray pattern. If the product is spraying and causing craters in the fluid, switching tips will help address that.

- **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 is time to replace the spray tip. Continuing to spray would simply result in a poor quality spray job, and a substantial waste of membrane and labor. Spray the membrane 12" from 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 number of the tip times 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. This illustration shows the effects of a worn tip on a spray pattern.

Optimal coverage will be achieved with the proper tip size.

- **How do I clean the spray equipment?** 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 one ExoAir/TREMproof product to the next ExoAir/TREMproof product.

Citrus Cleaner can also be used to flush the equipment when using ExoAir 220 and ExoAir 230. Citrus Cleaner should never be used to flush ExoAir 120 or TREMproof 260.

Never use Mineral Spirits to flush the pump as it could cause the ExoAir/TREMproof emulsions to get gummy.

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/water solution and brushed lightly with a small brush at the end of each days 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.

- **How often should I flush the pump?** *According to Spray Equipment, the pump does not need to be flushed every night as long as 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 ExoAir/TREMproof fluids from exposure to the air during the storage process as they will develop a skin on the surface. If spraying out of 5 gal 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 in order 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 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 ok to store the pump with a 50/50 solution of water and antifreeze. It is also ok to store the pump for longer periods of time with diesel fuel in the lines. This should not be diluted.*