



Building with conscience.

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Tech Hotline

No. C – 0215
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Airless Spraying of Sto Products

Product	Product #	Tip Size	Filter Size	@ Pump Pressure
Sto Gold Coat	81636	.031	#60	2700 – 3100
StoPanel AWRB	81835	.031	#60	2700 – 3100
StoGuard VaporSeal	80263	.027	#60	2700 – 3000
Sto AirSeal	81646	.025	#60	2500 – 2700
StoPrime	80804	.019	#60	1800 – 2100
StoPrime Hot	80805	.017	#60	1600 – 1900
StoPrime Block Surfacer HP	81520	.025	#60	1800 – 2100
StoPrime Conditioner	80831	.015	#100	1500 – 1900
Sto Clear Coat Sealer	80512	.015	#100	1500 – 1900
StoColor Metallic Base	81723	.019	#60	1800 -- 2100
StoColor Metallic Topcoat	81695	.015	#100	1500 –1900
StoColor Wood Stain	81713, 81714	.015	#100	1500 –1900
StoColor Lotusan	80217	.017	#60	1800 – 2100
StoColor Acryl Plus	80648	.019	#60	1800 – 2100
StoCoat Acryl	80201	.019	#60	1800 – 2100
StoCoat Color	80202	.019	#60	1800 – 2100
StoSilco Lastic	80222	.025	#60	2400 – 2700
Stolastic Smooth	80212	.025	#60	2400 – 2700
StoTique	80203	.015	#100	1500 – 1700
StoColor Dryonic	81518	.021	#60	2700 – 3100

Note:

These are general recommendations and should be used as starting points to determine pump type, tip size and pressure to use for a given Sto product. Tip size and pressure may vary depending on equipment used. Tip fan size will also vary depending on project needs. All products on the chart were sprayed using a fan size of 5. The filter size listed above is the finest mesh which will allow material to flow without being overly restrictive and clogging unnecessarily. Only substitute filters with larger mesh openings than what is listed. Some sprayers have a small filter in the gun handle, which should be removed.

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Tip Numbers

Spray tips are classified by 3 numbers. These numbers denote the fan and orifice sizes. Only orifice numbers are provided in the chart, because tips with the same orifice size can have different fan sizes.

Example:

Tip Number 531 – The first number, 5, indicates the fan size. Multiply this number by 2 to get the approximate width of the spray when applying at about 12” from the surface. In this case each pass would be about 10” wide when sprayed 12” from the surface. The last two numbers are the orifice size in thousandths of an inch. In this case this tip has a .031 (thirty-one thousandths) opening. Orifice size is directly related to how many gallons per minute of material can pass through the tip. The orifice size also limits the maximum particle size which can be sprayed through the tip without clogging.

Equipment Selection:

Select an airless sprayer based on the tip size required for the product being sprayed and the Maximum Tip Size Rating for the sprayer at the pressure required to spray the product. A general guideline is to use a pump that has a maximum tip size rating at least one size larger than what is needed for the coating being sprayed. This is done to allow for tip wear during use.

Example:

If a pump is rated for .031 (thirty-one thousandths maximum tip size) you would not want to spray a coating that requires using a tip larger than .029.

Sprayers are also rated in Gallons per Minute (GPM). Larger tip sizes require larger volume flow rates (GPM) to spray. Thus coatings which require larger orifice sizes will require sprayers with higher GPM ratings.

Here is a table of some flow rates

Orifice Size	.009	.011	.013	.015	.017	.019	.021	.023	.025	.027	.029	.031	.033	.035
GPM	.09	.12	.18	.24	.31	.38	.47	.57	.67	.77	.90	1.03	1.17	1.31

Water @ 2000psi - paints with a higher viscosity will decrease flow rate

Source: Portland Compressor, *Airless Sprayer Tip Sizing Guide*, www.portlandcompressor.com

Before selecting an airless sprayer always consult the pump manufacturer for recommendations based on types of material being sprayed

Additional information about spray equipment and basics of spraying coatings can be found at:

[The Basics of Airless Spraying](http://www.graco.com)
(www.graco.com)

[Airless Sprayer Tip Sizing Guide](http://www.portlandcompressor.com)
(www.portlandcompressor.com)