

## WOOD PRODUCT TECHNICAL DATA

**PST-917**  
**FLEXIBLE POLYESTER TOPCOAT**  
**FLAME RESISTANT PER FAR 25.853 60 SECOND VERTICAL BURN**

November 2011

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This clear, sprayable, polyester topcoat provides maximum gloss and depth. It also has excellent flex and flame resistance properties. It is used on items which, due to their shapes, cannot be mechanically buffed and polished, or when minimal spot buffing is required.

**GENERAL RULES:**

1. This product should be stored no longer than 12 months from date of manufacture. It should be kept in it's original container in a dark, cool, dry place away from a source of heat and at a temperature below 86°F.
2. For best performance the temperature of the product and room should be 69 - 79°F and the relative humidity 35 - 75%.
3. We recommend that the wood substrate be treated with flame retardant before coating with flexible polyester topcoat. The substrate needs to be well sanded with 180 - 220 grit paper, and must be free from dust and grease. The moisture content of the substrate should vary from 8 - 12%.
4. An **ISB/ISC** Series insulator must be applied before coating with polyester on woods such as Teak, Rosewood, and other exotic woods with a high content of tannin. It also must be applied after staining.
5. To avoid contamination/ moisture entrapment at raw wood or insulator level, allow insulator to dry a minimum of 30 minutes before handling or overcoating and always wear powder-free latex gloves when handling parts.

**MIXING INSTRUCTIONS:**

The **PST-917** Flex Polyester Topcoat (FR) requires the user to add both promoter and catalyst just prior to use. The standard additions are as follows:

- A) Promoter: Add 1% by volume of **PSC-507** Polyester Promoter. This mixture will be stable approximately 12 hours without a noticeable rise in viscosity. (This material must be agitated 3-4 minutes before adding catalyst. If not agitated, combustibility may occur).
- B) Catalyst: Add 2% by volume **PCC-901** Polyester Catalyst. This catalyst provides minimal dry times. Once catalyzed, however, the usable pot life is approximately 15 minutes (temperature dependent). Spray only an amount that can be consumed in this time frame.

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### PST-917 Cont'd

**ATTENTION:** *DO NOT MIX CONCENTRATED PSC-507 PROMOTER AND PCC-901 CATALYST TOGETHER. THIS MIXTURE CAN RESULT IN A VIOLENT CHEMICAL REACTION!*

		<u>5 Gallon Mix</u>	<u>1 Gallon Mix</u>	<u>1 Quart Mix</u>
<b>PST-917</b>	Flex Polyester Topcoat (FR)	20,000 ml	4,000 ml	1,000 ml
<b>PSC-507</b>	Polyester Promoter Use a 1.0% mix	200 ml	40 ml	10 ml
<b>PCC-901</b>	Polyester Catalyst			20 ml

### REDUCTION - VISCOSITY:

The **PST-917** polyester topcoat is intentionally shipped at a higher than normal spray viscosity. This is done to allow the user to compensate for temperature conditions, sprayer preferences, and varying spray equipment. Usually a reduction of approximately 5% by volume will provide a satisfactory spray viscosity. If ambient temperature is below 80°F (27°C), reduce with **RED-912** Solvent / Reducer. During very warm summer months when ambient temperatures exceed 80°F, reduce with **RED-937** Solvent / Reducer. We do not recommend spraying polyesters when ambient conditions are over 95°F (35°C) or the relative humidity above 75%, because the dry time and gel time become too fast which can cause "solvent pop" and other surface problems.

### SPRAYING:

Most spray equipment can be used\*. It is important that the topcoat be applied as "wet" as possible without sagging (approximately 4 - 6 mils gives best results). Keep air pressure low, i.e. 30 - 45 psi at the gun. Avoid dry spraying. Unlike lacquers, polyesters do not have enough solvent to completely re-wet dry spray.

Usually, one coat of topcoat is recommended and satisfactory. If two coats are desired, wait approximately 15 minutes or until "tacky" before spraying the second coat. If subsequent coats are desired after the polyester is dry, the part should be well sanded with 320 grit sandpaper to prevent intercoat adhesion problems.

#### \* Recommended Spray Equipment:

Graco 700N	Conventional spray gun 1.8 mm #2N tip and needle, #21 air cap
DeVilbiss JGHV530	HVLP spray gun (pressure feed) FX tip and needle, #705 air cap

### DRY TIME:

**Note:** Ambient temperature has a significant impact on dry times. For example, subjecting the part to 15 minutes of warm moving air after 15 minutes of flash time at 100°F will reduce the print free time by 50 - 75%. Conversely, it is important to note that the chemical reaction during curing will stop at temperatures below 68°F (20°C) or a relative humidity below 35%. Parts permitted to dry overnight must be subjected to a temperature above 68°F.

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Insulate substrate with a 1:1 mix of **ISC-909** and **ISB-910**. Spray about 2 wet mils and allow to dry for 30 minutes. Scuffing is not necessary if **PST-917** is applied before four (4) hours of spraying the insulator. If the Topcoat is to be applied after four (4) hours, the Insulator should be lightly scuffed with 320 grit sandpaper just prior to applying the **PST-917**.

The **PST-917** should be catalyzed with 1% **PSC-507** promoter depending on the ambient temperature and humidity. Please refer to technical data sheet. It is recommended that a 2% addition of **PCC-901** Catalyst remain constant. The **PSC-507** should be added first and mixed in well. The **PCC-901** should be added when the substrate is totally prepared and sprayed immediately. The pot life is approximately 10-12 minutes. Between 4 to 8 wet mils may be applied. Allow the material to flash off for 30 minutes or until tacky before applying the next coat.

The number of coats to be applied is dependent on the porosity of the substrate and the depth desired. The norm is 2 to 4 coats.

Allow the final coat to dry a minimum of 24 hours before sanding and buffing. The addition of heat and moving warm air will aid in the curing process. If heat is available, it should not exceed 120 degrees F. The longer the topcoat is cured the less post-shrinkage will be evident. The chemical reaction of the Catalyst with the Polyester is complete after 72 hours at room temperature.

To alleviate cracking of finished product when it is cut or drilled, the exposed area should be resealed with the polyester by catalyzing a small amount then apply by brush.

The method used to check for cracking and/or hazing is referred to as a "cold cycle". The procedure Axon Products employs on a coated panel with edges and back seal is as follows:

One cycle (includes the following):

1 hour at 120 degrees F                      Then directly into the freezer.  
1 hour at 5 degrees F  
30 minutes at 72 degrees F

Repeat this procedure for 10 cycles and inspect for cracking or hazing after each cycle.

**NOTE:** Buffing process may vary according to customer's choice.

One process is as follows: 800 Grit Dry 3M paper  
15 Micron 3M Polishing  
9 Micron 3M Polishing  
3 Micron 3M Polishing

Finally buff and polish with Finesse-ite (3M Part #051141-13084) Compound.