

# Instructions For Application of Porous, Fast-Response Pressure Sensitive Paint

(Product ID: FP-XXX)

**Warning!** Use with adequate ventilation or appropriate respiratory protection. This product is flammable; do not spray near flame, heat, or sparks. This product contains solvents and propellants that may damage some plastic surfaces. Important! This paint is for measurement purposes and should not be touched with bare hands where oils could potentially contaminate the painted surface and affect the performance of the paint.

## **Directions:**

1. Clean the model, calibration coupons, and a small test piece with alcohol or acetone on wipes.
2. The porous polymer PSP is shipped in 3 parts: part A, B, and C. First, determine how much paint you wish to spray on the model and remove this volume from part A. The volume of part B you need to add to part A is 4% of the part A volume. For example, if you want 40mL of paint for your model you would remove 40mL from part A into an empty jar and use the syringe to measure and add 1.6mL (4% of 40mL) from part B to the amount in the jar with part A. The syringe has markings in cc or cubic centimeter, and 1cc of water is 1mL of water. A syringe is included to make the process easier and if the syringe is rinsed with water after use, it may last a couple of uses. Once part A and B are measured together in a jar, put a lid on and shake the jar very well. Ideally, the paint in its container may also be partially submerged in an ultrasonic bath (cleaner) filled with water for a few minutes to enhance mixing. Part A and B compose the fast under layer for the PSP.
3. Pour the paint into the gun without filtering or straining. Thinning the paint is generally not recommended and ISSI will not warranty any paint once it has been thinned. However, the paint can be thinned with a small quantity of distilled water. Beware that too much will cause the paint to bead and adhere poorly.
4. Best results are achieved with a high volume low pressure (HVLV) spray gun. It produces less over spray, an overall smoother surface, and is easier to clean. Set the gun pressure to approximately 30 psig (200 kPa) and turn the siphon rate adjustment completely off. Open the siphon rate adjustment up until a light mist of paint is achieved from the nozzle of the spray gun when painting. The distance of the spray gun from the surface should be around 12 inches (30 cm). Some initial practice using inexpensive paints or some solvent will improve the results for novice painters. When ready for the base layer, apply a few quick passes with the spray gun until the surface is uniformly white and disassemble and clean the spray gun under the water tap immediately to prevent the base layer from setting in the spray gun. Let the surface dry at room temperature for 1 hour.
5. The same gun can be used to spray part C, the red top layer, if the gun is properly cleaned. Apply the top layer until the surface is uniformly pale pink and let the surface dry for 15 minutes. Purge the spray gun with solvent to clean it after the part C application. Once the surface is dry the model is ready for testing. If after running the test under the lamps or other excitation source for a few hours and the signal is diminished due to photo-bleaching, apply more overspray to enhance the fluorescence of the model and increase the signal to its previous level.

## **Most common reasons for Porous Fast Response paint failure:**

1. Too many coats on the surface can cause flaking of the paint.
2. Rough appearance of the base layer. The surface was painted too dry. The distance between the spray gun and the surface should be shortened or a slower sweeping painting technique should be tried.
3. Poor paint adherence. Either too much base layer on the surface or oil or grease residue on the surface caused by poor surface preparation. Oil and grease on the surface also affect the performance of the paint and the quality of the data obtained.

---

### **Innovative Scientific Solutions, Inc.**

7610 McEwen Road, Dayton, OH 45459  
Phone (937) 630-3012, Fax (937) 630-3015

email: [issi-sales@innsi.com](mailto:issi-sales@innsi.com)  
web: [www.innsi.com](http://www.innsi.com)

Any and all underlying information and technology contained in this document may be subject to U.S. export controls, including the Export Administration Act (50 U.S.C. 56 §§ 4601-4623) and the Export Administration Regulations ("EAR", 15 CFR Parts 730-774) and may be subject to export or import regulations in other countries. You are responsible for complying with all trade regulations and laws both foreign and domestic. Except as authorized by law or distributor agreement with ISSI, you agree and warrant not to export or re-export this information to any country, or to any person, entity, or end-user subject to U.S. export controls, including without limitation persons or entities listed on the U.S. Department of Commerce Bureau of Industry and Security's Entity List, Denied Person List, and Unverified List and the U.S. Department of Treasury's Specially Designated Nationals. You further represent and warrant that no U.S. federal agency has suspended, revoked, or denied your export privileges.



**Removal of PSP from surfaces:**

**Caution!** Acetone on wipes works best for metal surfaces, but will damage most plastic surfaces.

**Innovative Scientific Solutions, Inc.**

7610 McEwen Road

Dayton, OH 45459

Phone:(937) 630-3012

Email: [painting@innssi.com](mailto:painting@innssi.com)

---

**Innovative Scientific Solutions, Inc.**

7610 McEwen Road, Dayton, OH 45459

Phone (937) 630-3012, Fax (937) 630-3015

email: [issj-sales@innssi.com](mailto:issj-sales@innssi.com)

web: [www.innssi.com](http://www.innssi.com)

Any and all underlying information and technology contained in this document may be subject to U.S. export controls, including the Export Administration Act (50 U.S.C. 56 §§ 4601-4623) and the Export Administration Regulations ("EAR", 15 CFR Parts 730-774) and may be subject to export or import regulations in other countries. You are responsible for complying with all trade regulations and laws both foreign and domestic. Except as authorized by law or distributor agreement with ISSI, you agree and warrant not to export or re-export this information to any country, or to any person, entity, or end-user subject to U.S. export controls, including without limitation persons or entities listed on the U.S. Department of Commerce Bureau of Industry and Security's Entity List, Denied Person List, and Unverified List and the U.S. Department of Treasury's Specially Designated Nationals. You further represent and warrant that no U.S. federal agency has suspended, revoked, or denied your export privileges.