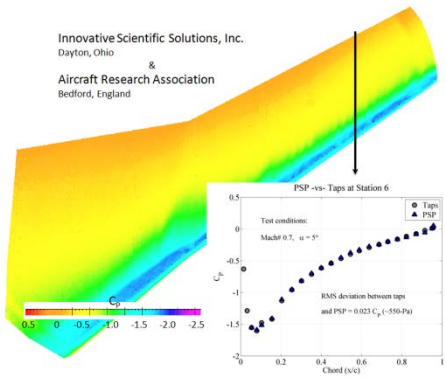
ISSI

Innovative Scientific Solutions, Inc.

Binary FIB™ Pressure Sensitive Paint

(Product ID: BF-XXX)

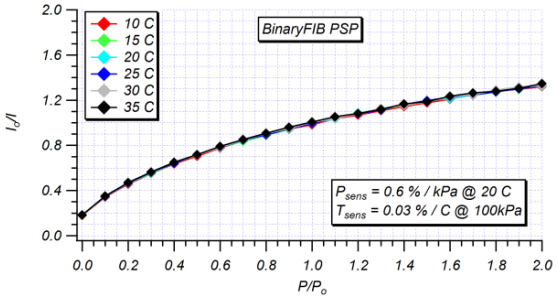
Binary FIB pressure sensitive paint (PSP) is a dual-luminophore, single application PSP formulated to be applied with paint spraying equipment. The binary paint approach involves acquiring data from two distinct luminescent dyes and using these signals to compensate for errors caused by model displacement and deformation as well as temperature. One dye is pressure and temperature sensitive and the other dye is temperature sensitive only. The ratio of the signals from the two dyes allows the temperature sensitive signal to be isolated from the pressure sensitive signal. The temperature sensitivity of the paint can be minimized over a wide range of temperatures and pressures as shown in the calibration below. The paint may be applied to most materials, however a white base coat such as SCR-XXX (Screen layer) or FB-XXX (FIB basecoat) is recommended. Models constructed of materials that may be attacked by solvents such as plastic or rapid prototyping resin should be coated with a screen layer or FIB basecoat. The calibration of Binary FIB is very stable, repeatable, and exhibits very little temperature sensitivity. Binary FIB is recommended for advanced/professional PSP users who seek high quality data in low-speed environments or where temperature gradients are larger and have a greater impact on the signal-to noise ratio.



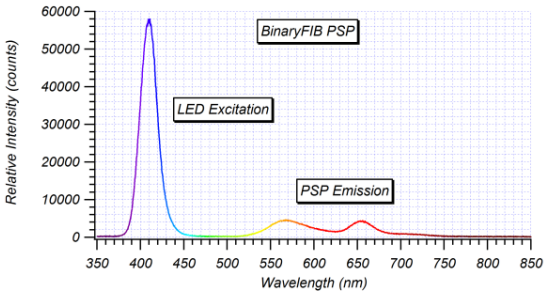
Binary FIB painted on a wing during a transonic test

SPECIFICATIONS

Pressure sensitivity	0.6% per kPa
Pressure range	0-kPa to 200-kPa
Temperature sensitivity	0.03% per °C
Temperature range	0°C to 50°C
Response time	300-ms
Excitation	380-nm to 420-nm
Emission	500-nm to 720-nm
Photo-degradation rate	1% per hour
Shelf life	12-months
ECCN	EAR99



Calibration of Binary FIB PSP



Emission spectra of Binary FIB PSP.
Paint excited using LM2X-DM-400 LED

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