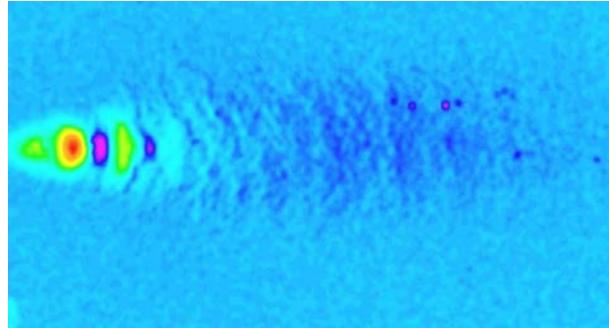


# Binary UniCoat Pressure Sensitive Paint

(Product ID: BUNC-12)

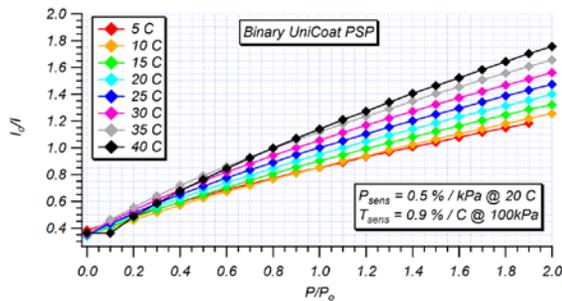
Binary UniCoat is a dual-luminophore pressure sensitive paint (PSP) packaged in an aerosol can for ease of application. The binary PSP approach involves acquiring data from two distinct luminescent dyes and using these signals to compensate for errors caused by model displacement and deformation. Binary UniCoat has higher temperature sensitivity and lower pressure sensitivity than FIB based paints as shown in the calibration below. A desirable feature of Binary UniCoat is ease of application. Simply shake the can and spray the surface. The result is a single coat application paint that may be applied directly to most materials. Binary UniCoat is an effective quantitative PSP in isothermal environments (large metal models and temperature controlled tunnels) or where strong pressure variations are present (transonic and supersonic flows). It is also effective in compensating for errors due to model displacement and deformation. Binary UniCoat is recommended for introductory PSP users who seek an inexpensive means to gain experience with binary paints.



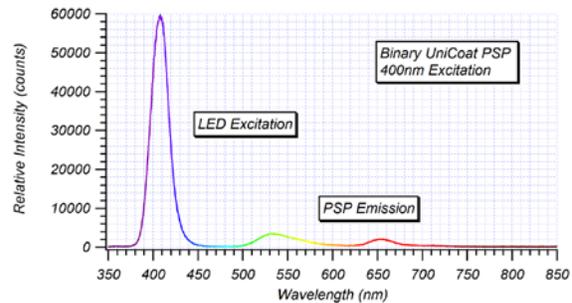
Pressure distribution on the surface of an impinging jet.

## SPECIFICATIONS

|                               |                  |
|-------------------------------|------------------|
| Pressure sensitivity .....    | 0.5% per kPa     |
| Pressure range .....          | 0-kPa to 200-kPa |
| Temperature sensitivity ..... | 0.9% per °C      |
| Temperature range .....       | -10°C to 60°C    |
| Response time .....           | 750-ms           |
| Excitation .....              | 380-nm to 520-nm |
| Emission .....                | 500-nm to 720-nm |
| Photo-degradation rate .....  | 1% per hour      |
| Shelf life .....              | 12-months        |
| ECCN .....                    | EAR99            |



Calibration Plot of Binary UniCoat PSP



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