Surface Phase®
Tactile Pressure Indicating Film

Tactile Pressure Indicating Film

A unique, affordable and easy to use tool that reveals the distribution and magnitude of pressure between any two contacting, mating or impacting surfaces.

Have you ever needed to evaluate pressure or force between two touching or mating surfaces? Previously, your only alternatives were strain gauges and load cells, which are both time consuming and difficult to apply and instrument. Now with the advent of our disposable one-time use pressure indicating film, Surface Phase®, evaluating surface contact pressure distribution and magnitude is accurate, quick and highly economical.

Common Applications

Packaging & Converting:
nip roller impressions, heat sealing, lamination

Automotive:
brake pad, clamping, clutch, battery & fuel cell, impact, gasket/bolted joint, lamination, welding, wiper

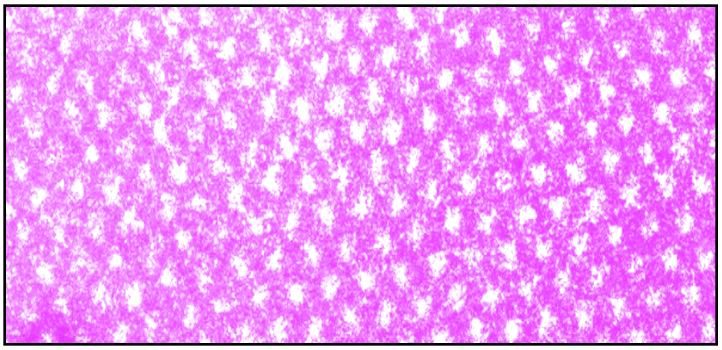
Electronics:
heat sink, BGA, connector, lamination, LCD bonding, wafer bonding / polishing, solar cells

Aerospace:
composite layup, fuel cell, lamination, impact, bolted interface

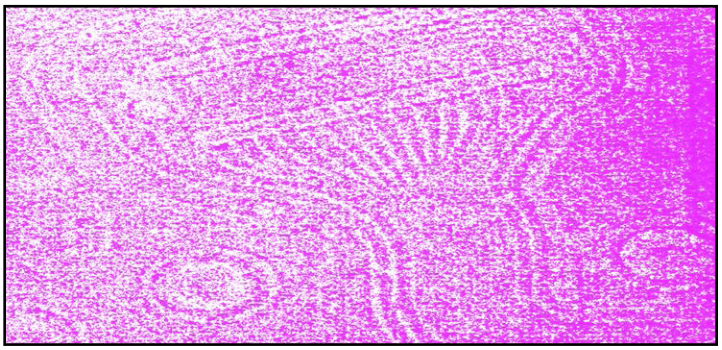
Ergonomics:
biomechanics, body mapping

EXAMPLE APPLICATIONS

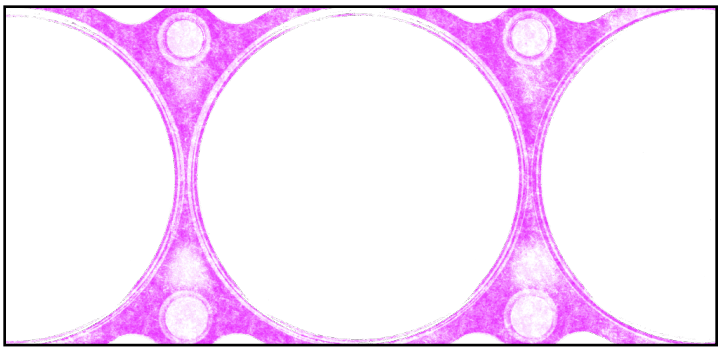
NIP IMPRESSION



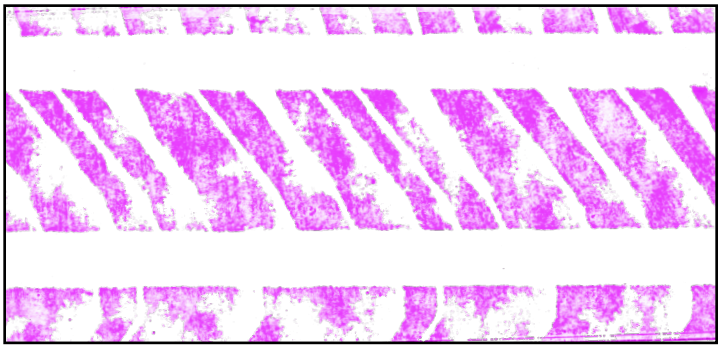
LAMINATION PRESS



GASKETED INTERFACE



TIRE TREAD



Tactile Pressure Indicating Sensor Film

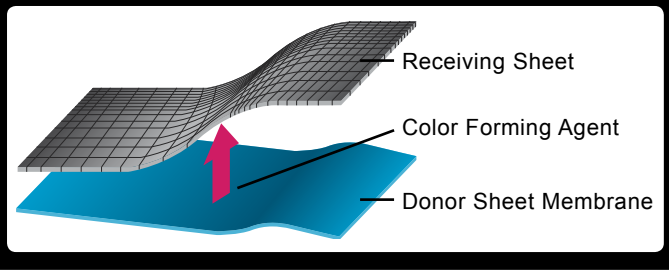
Accurate, Cost-effective, Easy to Employ Pressure Mapping Technology

How It Works

Surface Phase® pressure indicating film (patent pending) is comprised of two sheets of film. A donor sheet consisting of a microporous membrane impregnated with a color forming dye. And a receiver sheet (sheet that changes color) consisting of a Silica based microporous void structure. When the donor sheet and receiver sheet are laid together and placed between interfacing surfaces, the contact pressure causes the color forming dye to repel from the donor sheet and chemically bond with the Silica thereby creating an instantaneous and permanent color change. The resultant color intensity is directly proportionate and permanent to the pressure applied at any given point on the film surface.

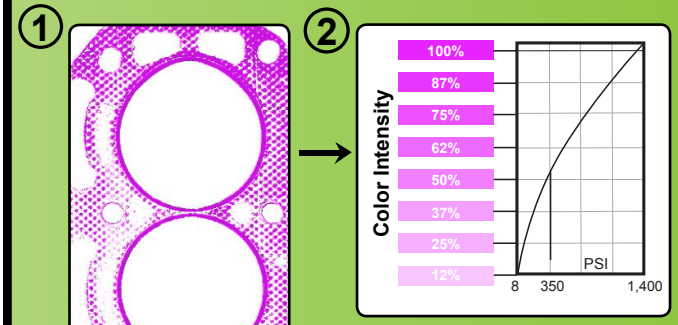
Film Type	Pressure Range
SP1	10 – 90 PSI (0.7 – 6.3 kg/cm²)
SP2	70 – 500 PSI (4.9 – 35.2 kg/cm²)
SP3	350 – 1,400 PSI (24.6 – 98.4 kg/cm²)

Cross sectional view of Surface Phase® film



NIST TRACEABLE!

How to Interpret Surface Phase® Impressions



Surface Phase® film revealing pressure across a bolted interface.

Color intensity reveals precise pressure magnitude.

Like Litmus paper, the color that Surface Phase® sensor film turns has significance. It is directly related to PSI (kg/cm²), and can be visually compared to our color correlation chart or scanned and quantified with one of our optional optical imaging systems.

Specifications

USABLE TEMPERATURE RANGE	5°C to 35°C
USABLE HUMIDITY RANGE	10% to 90% RH
GAUGE	0.19 mm (7.5 mils)
SPATIAL RESOLUTION	2.6 microns
ACCURACY	±10%
SHELF LIFE	2 years
TRACEABILITY	NIST

TACTILE PRESSURE EXPERTS
SPI
SENSOR PRODUCTS INC.

台灣經銷代理
鴻隼企業有限公司
Falco Tech Enterprise Co., Ltd.

SPI感壓紙
詢價訂購
傳送門

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