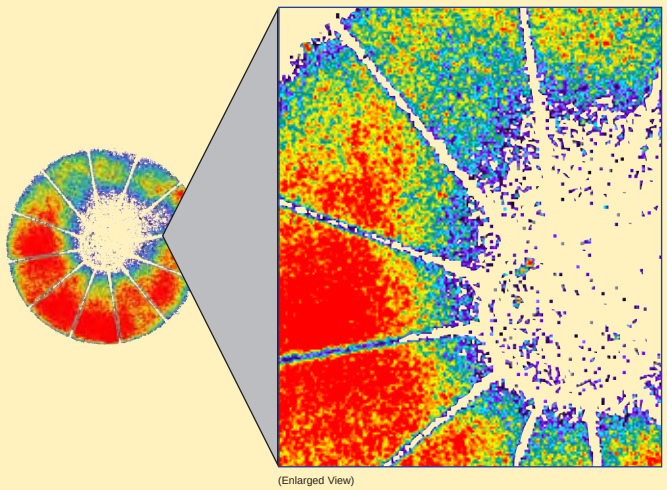
Pressurex®

TACTILE PRESSURE INDICATING SENSOR FILM

Application: Heat Sink

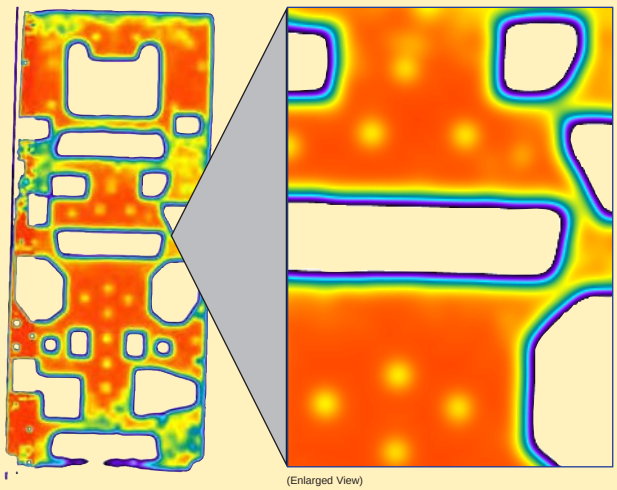
Pressurex® is a thin flexible mylar film that reveals pressure distribution and magnitude between any two contacting surfaces. Pressurex can aid significantly in performing thermal analysis between a heat sink (transistor) and heat source. Examining a typical heat sink/heat source interface reveals microroughness and planarity problems that can not be detected by the human eye alone. Pressurex can determine exactly how much pressure is occurring at any point of the interface surface, helping balance the tradeoff between greater thermal conductivity (more tension at the interface) and substrate cracking due to overtensioning of the mounting bolts. Finally, Pressurex indicates how interface materials compress and comply under load.

Example Images Revealing Pressure Distribution:



(Enlarged View)

SEMICONDUCTOR MOUNT



(Enlarged View)

RECTIFIER

Above film images are further analyzed with our Topaq, optical scanner, system.

IMAGINE...

a sensor as **LARGE**, THIN and **FLEXIBLE** as this page...

Upon the application of force the microcapsules rupture, producing an instantaneous and permanent color change. Like Litmus paper, the color intensity of Pressurex is quantifiable; the color intensity reveals precisely what pressure level (PSI or kg/cm^2) was applied at any discrete point on the surface of the film.

PHYSICAL SPECIFICATIONS	
TEMPERATURE RANGE	41°F/5°C to 95°F/35°C (higher for brief exposure)
HUMIDITY RANGE	20 to 90% RH
GAUGE (Thickness)	4, 8, 20 mils
SPATIAL RESOLUTION	5 to 15 microns
SUBSTRATE	Polyethylene Terephthalate (PET)
ACCURACY	±10% visual, ±2% utilizing optical measurement systems
SHELF LIFE	2 Years

FILM TYPE	PRESSURE RANGE
MICRO *(Shows relative pressure distribution only)*	2 - 20 PSI/(0.14 - 1.4 kg/cm^2)
ULTRA LOW	28 - 85 PSI/(2 - 6 kg/cm^2)
SUPER LOW	70 - 350 PSI/(5 - 25 kg/cm^2)
LOW	350 - 1,400 PSI/(25 - 100 kg/cm^2)
MEDIUM	1,400 - 7,100 PSI/(100 - 500 kg/cm^2)
HIGH	7,100 - 18,500 PSI/(500 - 1,300 kg/cm^2)
SUPER HIGH	14,000 - 43,200 PSI(984 - 3,000 kg/cm^2)

TACTILE PRESSURE EXPERTS
SPL
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