



Use of Pressurex® Pressure Indicating Sensor Film Increases Bond Strength and Reduces Defects in Ultrasonic Welding of Packaging

(Madison, NJ) – October 31, 2010 – Ultrasonic Welding (USW), the joining technique that uses high-frequency ultrasonic acoustic vibrations to create solid-state welds, is used in packaging for many everyday items. Sealing containers, tubes and blister packs are some common packaging applications for ultrasonic welding. The food industry prefers the fast, sanitary hermetic seals produced with ultrasonic welding, especially for candy wrappers, juice, and milk containers. Generally, paper parts to be sealed are coated with polypropylene or polyethylene, and then welded together to create an airtight seal.

To optimize the strength of the weld and prevent defects which would cause leakage or spoilage, the horn and anvil must be precisely aligned during setup so that the horn exerts uniform pressure across the entire weld area. Since no built-in device for contact pressure distribution measurement exists, an economical and precise procedure that will ensure this outcome involves the use of Pressurex® pressure indicating sensor film.

Routine use of Pressurex® during the setup of ultrasonic welders helps ensure proper contact pressure and alignment between the horn and anvil, which results in welds of greater bond strength and aids in reducing rejected product and lowering base factory cost.

When placed between the horn and the anvil of the ultrasonic bonder, Pressurex® instantaneously and permanently changes color directly proportional to the actual pressure applied. The precise pressure magnitude (PSI or kg/cm²) is then easily determined by comparing color variation results to a color correlation chart (conceptually similar to interpreting Litmus paper).

These pressure maps show pressure variations across the weld zone which can result in less than optimal weld strength. Such variations are generally caused by lack of alignment between the horn and anvil or by dirt or residue on the horn.

For further information and a sample in your pressure range, contact Sensor Products Inc. at 1.973.884.1755 (USA), email info@sensorprod.com or visit www.sensorprod.com/sample

About Sensor Products Inc. (USA)

Headquartered in New Jersey and established in 1990, Sensor Products Inc. is a world leader in the manufacture and distribution of tactile pressure sensing solutions. Their customized and off-the-shelf products are installed within all of the Fortune 500 industrial companies as well as thousands of smaller manufacturing firms. Their sensors are used in applications as diverse as tire testing to semiconductor manufacturing and from R&D labs to space missions. Additionally, Sensor Products provides in-house and on-site stress and pressure mapping analysis, as well as a variety of regional technical seminars.