



RAM SOLUTIONS, LLC

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## RAM SOLUTIONS SPOT WELD GEL

**Couplant of choice for high frequency inspection of spot welds**

### PRODUCT OVERVIEW

Spot Weld Couplant is a specially formulated substance used in ultrasonic testing to ensure effective transmission of sound waves between the inspection probe and the test material—typically sheet metal in automotive or aerospace manufacturing. It plays a crucial role in the quality and accuracy of spot weld inspections.

**This couplant is optimized in three key areas:**

**Acoustic Impedance:** This refers to the resistance a material offers to the passage of sound waves. The acoustic impedance of the Spot Weld Couplant is matched to both the probe and the metal surface to maximize sound transmission and minimize reflection. This ensures a clearer, more reliable ultrasonic signal.

**Viscosity:** The couplant has a viscosity tailored for controlled application. It's thick enough to stay in place during the inspection process, which helps maintain a consistent contact area between the probe and the weld surface, but not so thick that it traps air bubbles or interferes with signal quality.

**Removal Characteristics:** After the inspection, the couplant must be easy to clean off without leaving residues or damaging the part being tested. This is especially important in high-volume or high-precision manufacturing environments.

Because of these properties, Spot Weld Couplant is the preferred choice for high-frequency ultrasonic testing, typically in the 10–15 MHz range, where precision is critical. It's particularly used in go/no-go inspections with ultrasonic array probes, where the goal is to quickly determine whether a spot weld meets the required standards or needs rework, without extensive analysis.

### PRODUCTS SPECS

- Gel couplant, not stringy or sticky
- Gel viscosity remains in place for overhead and vertical surfaces
- Broad operating range
- Slow drying
- Water-soluble
- Easy to remove
- Blue color, helpful in low light conditions



**SCAN TO BUY NOW**



**OPERATING RANGE:** -18° to 224°F (-28° to 107°C)

**VISCOSITY:** Medium flowable gel

**HALOGENS AND SULFUR:** Less than 50 ppm

**pH:** 8.0 nominal at 20°C

**Packaging:** Carton of twelve 12 oz / 355 ml bottles

**Ford Tox #:** 518498