

# Heat Seal and Packaging Solutions



Silicone Rubber offers complete coverage of surface imperfections ensuring consistent, reliable seals, leading to higher yields and reduced scrap. Compliant materials are specifically formulated for the temperature and pressure requirements of heat sealing and packaging applications. United Silicone's "Total Tooling" approach provides disposable heads molded to match part configurations, eliminating costly machining. QuickChange mounting systems allow for easy changeovers without disrupting production efficiencies.

## United Silicone offers a complete line of Heat Seal Tooling and Supplies

### Seal Heads

- Silicone and Metal Available
- Custom Molded
- Repeatable from Head-to-Head

### Silicone Rubber Sheets

- Standard Sizes— 12" x 24"  
24" x 36"
- Precision Ground for Flatness
- Bonded & Unbonded
- Various Aluminum Thicknesses

### Rollers

- Various Silicone Formulations
- Flat, Contoured, or Stepped
- Face Lengths up to 110"
- Finished OD to 20"

### Tooling

- Part Holding Fixtures
- Magnetic Mounting Systems
- Complete Machine Shop Capabilities

### Common Applications:

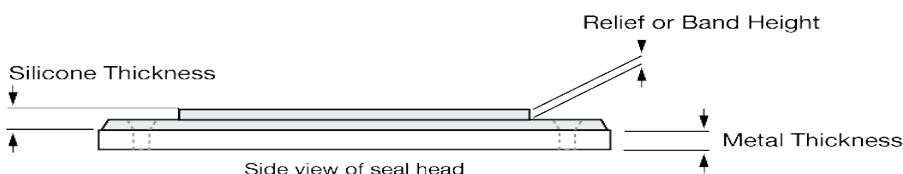
- Bag Sealing
- Blister Packaging
- Laminating
- Cup & Tray Sealing
- Packaging

### Benefits:

- Excellent Silicone to - Metal Bond
- Thermally Conductive
- Heat Tolerant to 550°F
- Various Formulations
- Resistant to Compression Stress
- 40-90 Durometer (Shore A)
- 3A Certified Materials

### Availability:

- Bar Sealers
- Magnetic Mounting Blocks
- Platens and Anvils
- Rollers
- Seal Heads
- Silicone Sheets
- Teflon-Silicone Seal Bars



### Trusted Partner for Your Product Decorating Needs

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## HEAT SEAL TECHNICAL BROCHURE

### Properties of Silicone Rubber Formulations

Formulation	Duro (Shore A)	Tensile Strength (PSI)	Elongation (%)	Compression Set (%)	Heat Resistance	Specific Gravity
Ultrasil (Red)	90	1110	125	30	550	1.75
	80	1100	185	24	550	1.72
	70	1030	270	20	550	1.6
	60	1050	365	18	550	1.45
	50	940	535	17	550	1.35
	40	890	100	15	550	1.11
Thermosil (Brown)	90	1075	120	14	550	2.1
	80	1050	175	12	550	2.09
	70	1030	215	7	550	1.8
	60	980	423	6	550	1.63
FDA 3A (red) Class I	60	1354	423	6	500	1.17

Ultrasil	Thermosil	FDA-3A
Demanding vertical & peripheral operations requiring high temperatures and/or high pressures – typically manually fed.	Semi – Automatic and fully automated sealing applications requiring very stable high temperatures and rapid heat recovery.	3A Sanitary - Class 1 Test Specifications.

**Durometer** – The Hardness of a material as measured on the Shore A Scale

**Tensile Strength** – The pulling stress just before the material breaks into 2 pieces

**Elongation** – The fractional increase in length of a material, stressed in tension, just before it breaks into two pieces

**Compression Set** – The measure of material resiliency after being subjected to compression and heat

**Heat Resistance** – Ability of a material to remain bonded to metal during exposure to extreme temperature.

**Specific Gravity** – The density of material divided by that of water

Contact U.S. to see our complete line of Hot Stamp & Heat Transfer Equipment & Supplies!



United Silicone, part of Industrial Decorating Solutions (IDS), specializes in the design and production of standard and custom hot stamp and heat transfer decorating machines.

United Silicone also provides a complete range of supplies including: silicone rubber dies, rollers, sheets, part holding fixtures and heat seal supplies.

As a leading designer and manufacturer of state-of-the-art plastics decorating systems, United Silicone has the in-house engineers to provide solutions to your toughest decorating problems.

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