



PACKAGING SOLUTIONS-TECHNICAL DATA SHEET

United Silicone 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.

Quick-Change mounting systems allow for easy changeovers without disrupting production efficiencies.



Common Applications

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

Benefits

- Excellent Silicone-to-Metal Bond
- Thermally Conductive
- Heat Tolerant to 550°F
- Various Formulations
- Resistant to Compression Stress
- 40 to 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

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 and unbonded
- Various aluminum thicknesses

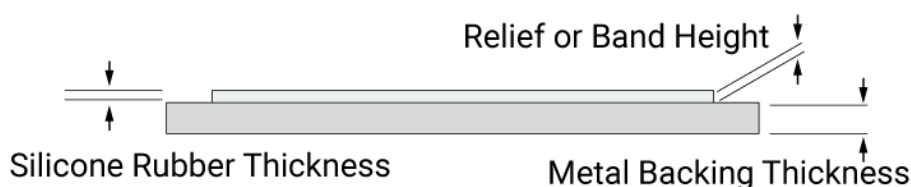
Seal Heads

- Various silicone formulations
- Flat, contoured or stepped
- Face lengths up to 120"
- Finished OD to 20"

Seal Heads

- Part holding fixtures
- Magnetic mounting Systems
- Complete machine shop capabilities

Side view of seal head





Ultrasil	Thermosil	FDA and FDA-3A
Demanding vertical and 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.	FDA (CFR Title 21 Part 177.2600) Food Grade Compliant (80 Shore A). 3-A Sanitary Class I Certified (60 Shore A).

Properties of United 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	1.60
	60	1050	365	18	550	1.45
	50	940	535	17	550	1.35
Thermosil (Brown)	40	890	100	15	550	1.11
	90	1075	120	14	550	2.10
	80	1050	175	12	550	2.09
	70	1030	215	7	550	1.80
	60	980	423	6	550	1.63
FDA-3A (red)	60	1354	423	6	500	1.17

Durometer – The hardness of a material as measured with a Shore durometer instrument. Shore A is the durometer scale used to measure the hardness of flexible molded rubbers.

Tensile Strength – The pulling stress just before a material breaks into two pieces.

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

Heat Resistance – The ability of a material to remain bonded to metal during exposure to extreme temperature.

Specific Gravity – The density of a material compared to the density of water.