

# United Silicone Heat Seal Silicone Rubber Sheet Stock



**Metal bonded silicone rubber sheet stock** is used for heat seal packaging applications that require heat resistance and thermal conductivity. United Silicone rubber withstands the temperatures, pressures and dwell times that heat sealing applications require. Compression molding (vertically manufactured) limits the maximum sheet size to 24"x36", but it provides United Silicone rubber with **increased durability in comparison to extruded silicone rubbers.**

## 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)
- FDA Food Grade Compliant and 3-A Sanitary Class I Certified Options

### Silicone Rubber Sheets

- Sizes - 12" x 24" or 24" x 36"
- Metal Bonded Sheets are Precision Ground for Flatness
- Metal Bonded, Unbonded Ultrasil and Unbonded Thermosil Options
- 40 to 90 Durometers (Shore A)

### Rubber Thickness (A)

- 1/32" to 1/2"

### Metal Backing (B)

- Aluminum – 1/32" to 1" Steel – 1/16" and 1/8"
- Unbonded, aluminum, cold roll steel, stainless steel or dead soft aluminum (1/16" only; easily formed to match contoured surfaces)

## Industrial Uses:

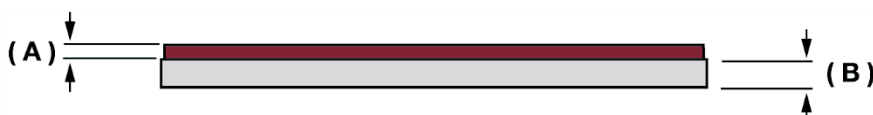
- Packaging
- Bag Sealing
- Tray Sealing
- Rigid Packaging

## Common Formats:

- Platens
- Gaskets
- Seal Bars
- Seal Heads
- Gripper Fingers

Side view of sheet

Silicone Rubber Thickness



Metal Backing Thickness

## HEAT SEAL SILICONE RUBBER SHEETS - TECHNICAL DATA SHEET

### Properties of United Silicone Rubber Formulations

Formulation	Duro (Shore A)	Tensile Strength (PSI)	Elongation (%)	Compression Set (%)	Heat Resistance	Specific Gravity
<b>Ultrasil (Red)</b>	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
	40	890	100	15	550	1.11
<b>Thermosil (Brown)</b>	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
<b>FDA-3A (red)</b>	60	1354	423	6	500	1.17

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).

**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.

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