

SILICONE ROLLERS

SUPERIOR REPEATABILITY & EFFICIENCY



Clear Market Leader

United Silicone's silicone rollers combine

- **market-leading** repeatability,
- **market-leading** efficiency,
- **market-leading** bond strength and
- **market-leading** thermal conductivity in a
- **market-leading** range of sizes.

Market-Leading Efficiency

Re-Coatable Option



- Machined metal roller cores can be recoated in new silicone
- Generates **nearly 50% and 250% cost savings** for smaller and larger rollers respectively
- Reduces waste

Double-Banded Option



- When the silicone on one side of the roller becomes worn and requires replacement- the roller can simply be reinstalled on the other side
- **Double the life expectancy of rollers**

Market-Leading Repeatability

CNC Contouring

- Advanced CNC system digitally profiles rollers for contoured applications
- Precise fit to part shape
- Profile stored for future use
- Enhances repeatability



Precision Finish

- We surface grind each roller to ensure
- Precise OD and TIR measurements
 - Smooth surface finish



Market-Leading Durability



Proprietary Silicone-to-Metal Bond

- silicone does not delaminate
- no messy adhesives



Market-Leading Thermal Conductivity

- rollers do not become "sticky" or "gummy" when exposed to high heat

Silicone Roller Uses

Rollers for:	On:	To Provide:
<ul style="list-style-type: none"> • Hot stamp • Heat transfer • Heat seal * <p>* For use on United Silicone or competitor equipment</p>	<ul style="list-style-type: none"> • Extruded products • Cylindrical shapes • Large, flat surfaces • Curved surfaces • Raised surfaces 	<ul style="list-style-type: none"> • Banding • Tipping • Laminating • Hot stamping • Heat transfer • Feed & guide rollers • Liner-less label

Properties of Silicone Rubber Formulations

Formulation	Duro* (Shore A)	Tensile Strength (PSI)	Elongation (%)	Compression Set (%)	Heat Resistance	Specific Gravity
Ultrasil (Red) – often manually loaded applications)	90	1110	125	30	550	1.75
	80	1100	185	24	550	1.72
	60	1050	365	18	550	1.45
Thermosil (Brown) - often semi and fully-automated applications	90	1075	120	14	550	2.1
	80	1050	175	12	550	2.09
	60	980	423	6	550	1.63
FDA 3A (Red) – Class I		1354	423	6	500	1.17

*Additional durometers also available on request

Custom Rollers

United Silicone offers an industry leading range of roller sizes. Our rollers are available in up to 20 inch outside diameter and 110 inches face length (3 and 4 times longer respectively than what is commonly available in the market).

We manufacture both aluminum and steel roller cores designed to precisely meet application requirements.

