

Composite Curing Flexible Heater Blankets

Specialized Silicone Rubber Heater Blankets are used in the composite industry to bond and cure composite structures using vacuum bagging techniques which have become standard in the industry.

Tempco's composite bonding and curing heater blankets are designed with the field technician in mind with an extra strong strain relief, and even heat distribution to produce the best possible cure or bond.

Temperature uniformity is optimized for even heating through computer designed resistance elements. Circuit spacing is maintained at 1/4" for larger heater blankets or less on smaller heaters. This technique guarantees a $\pm 10^{\circ}\text{F}$ ($\pm 5.5^{\circ}\text{C}$) temperature uniformity across the heater blanket.

The lead wires exit the heater through an unheated 2" \times 2" lead exit tab. This allows the overall heater surface to be heated while maintaining a separate unheated section for the transition from resistance element to the leads and a solid strain relief.

Tempco's Composite Curing Heater Blankets emphasize strength, durability, flexibility and overall temperature uniformity.

Design Features

- * **Maximum Temperature:** 500°F/260°C intermittent
450°F/232°C continuous
- * **Material:** Fiberglass reinforced Silicone Rubber
- * **Smooth bottom layer for contact with the composite under cure**
- * **External Lead Exit Tab, 2" \times 2" maximizes heating area and uniformity**
- * **Lead wire:** Teflon®, 5-ft. length, 400°F/200°C, 600V
- * **Composite Industry Watt Density Standard of 5 watts/in²**
- * **Available Voltage:** 120 Vac or 240 Vac
- * **Meets Composite Industry uniformity standard of $\pm 10^{\circ}\text{F}$**
- * **Each heater blanket has a serial number for traceability**
- * **Heat Mapping Certification available**
- * **Made to Order:**
 - Maximum Width:** 36" (914mm)
 - Maximum Length:** 120" (3048mm)
 - Maximum Diameter:** 32" (813mm)
- * **UL recognized**

Standard (Non-Stock) Round Flexible Heater Blankets

Diameter inches	mm	Watts	Voltage	
			120	240
6	152	170	SHS89041	SHS89044
10	254	470	SHS89042	SHS89045
15	381	1055	SHS89043	SHS89046



Note: Round heaters have a higher watt density than listed rectangular sizes, and provide an additional 20% of surface heat.



Typical Applications

- ⇒ **Aerospace/Aircraft**
 - Repair
 - Manufacturing
- ⇒ **Marine/Boats**
 - Repair
 - Manufacturing
- ⇒ **All composite, metal bonding, curing applications**



Thermal Mapping

It is a known fact in the composite repair industry that the quality of the overall repair often relates directly to the quality of the cure. The cure in turn is directly affected by the temperature uniformity of the heat blanket.

Thermal/heat mapping certification of the heater blanket is rapidly becoming the standard operating procedure for many repair facilities to optimize the cure process.

As an added value service, Tempco can certify that the heat blanket you order follows the guidelines established by the Commercial Aircraft Composite Repair Committee (CACRC), SAE document ARP 5144 Section 7, which states specific recommendations for the "...handling, maintenance and thermal testing of heat blankets..." The heater blanket certification also meets the requirements of Boeing document D6-56 273 "Qualification of Heat Blankets for Hot Bonding Composites."

Standard (Non-Stock) Flexible Heater Blankets

inches L	inches W	mm L	mm W	Watts	Voltage	
					120	240
4	10	102	254	200	SHS89001	SHS89021
6	6	152	152	180	SHS89002	SHS89022
6	8	152	203	240	SHS89003	SHS89023
6	10	152	254	300	SHS89004	SHS89024
6	20	152	508	600	SHS89005	SHS89025
6	24	152	610	720	SHS89006	SHS89026
6	36	152	914	1080	SHS89007	SHS89027
8	8	203	203	320	SHS89008	SHS89028
8	12	203	305	480	SHS89009	SHS89029
10	10	254	254	500	SHS89010	SHS89030
10	12	254	305	600	SHS89011	SHS89031
10	18	254	457	900	SHS89012	SHS89032
12	12	305	305	720	SHS89013	SHS89033
12	18	305	457	1080	SHS89014	SHS89034
12	24	305	610	1440	SHS89015	SHS89035
15	15	381	381	1125	SHS89016	SHS89036
15	18	381	457	1350	SHS89017	SHS89037
18	18	457	457	1620	SHS89018	SHS89038
18	24	457	610	2160	SHS89019	SHS89039
24	24	610	610	2880	SHS89020	SHS89040