T·Global
Technology

Product Training Module:
Low Bleed Series Thermal Pads

Introduction

- **Purpose**

This training module is used to give an introduction T-Global Technology's Low Bleed series of silicone-based thermal pads

- **Objectives**

To identify the key properties of the Low Bleed series pads
To identify the key design criteria for product selection
To identify common applications

- **Content**

Introduction and background to the Low Bleed series

- **Learning time**

15 mins

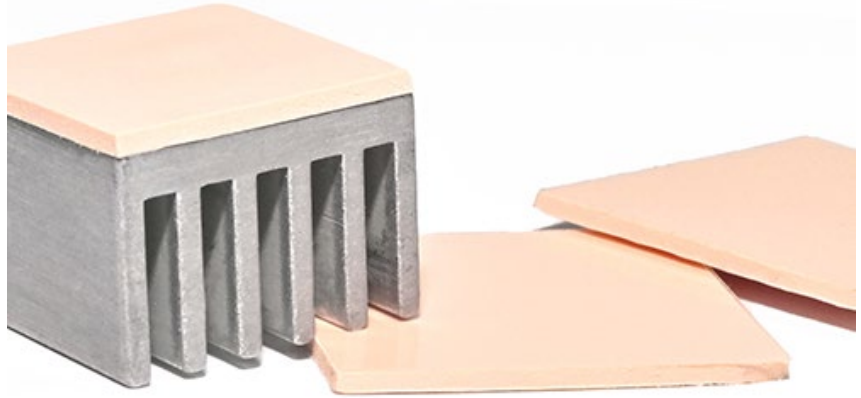
Introduction

- The Low Bleed series is one of T-Global Technology's latest silicone-based thermal pads with advanced oil bleed reduction technology
- The series was developed to offer the same performance as a traditional silicone pad without the associated levels of oil migration
- Each member in the family has been developed to address specific industrial needs
- All products are available as standard sheets or cut-parts in thicknesses from 0.5 - 8.0mm

Low Bleed Series

TG-A1800L Low Bleed Thermal Pad

- 1.8 W/mK Thermal Conductivity
- 35 Shore 00 Hardness
- Low Oil Bleed
- High DBV >7 kV/mm
- Low Thermal Impedance
- Natural Tack



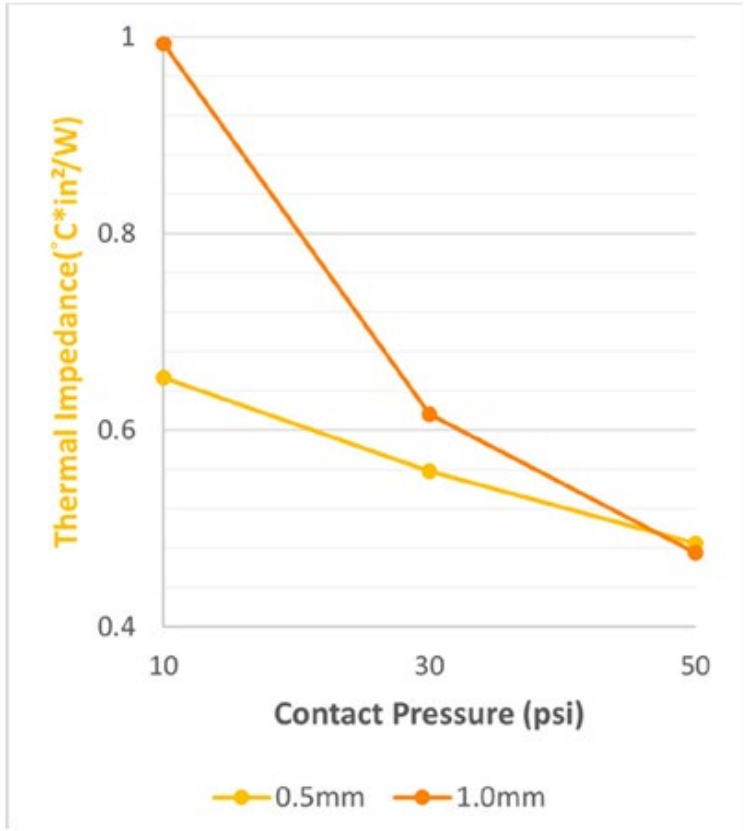
Low Bleed Series

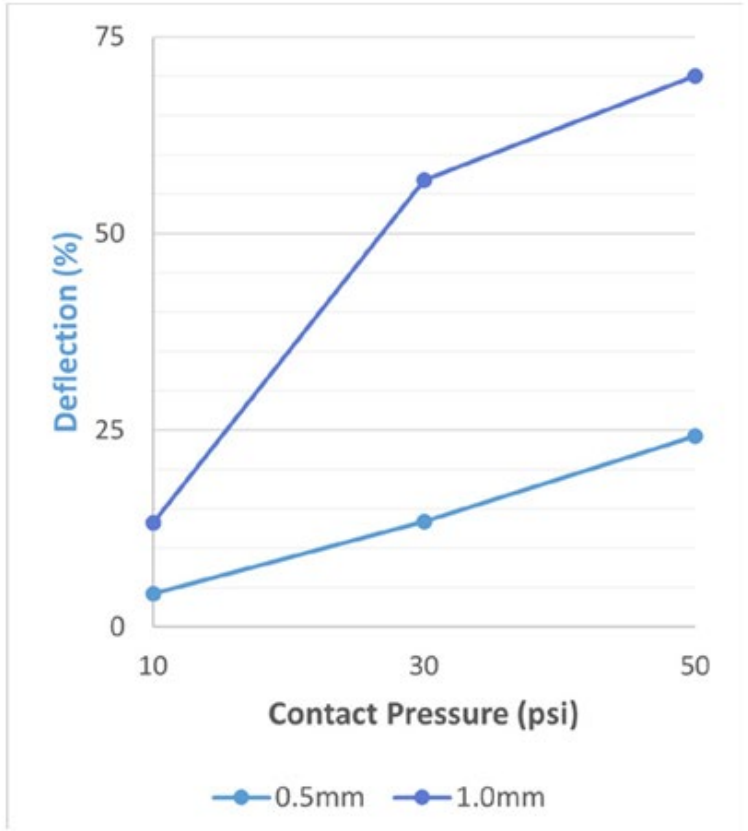
TG-A1800L Low Bleed Thermal Pad

Properties	Unit	TG-A1800L	Tolerance	Test Method
Thermal Conductivity	W/m·K	1.8	±10%	ASTM D5470 Modified
Thickness	mm	0.5~8.0	-	ASTM D374
	inch	0.0197~0.3149	-	ASTM D374
Color	-	Pink	-	Colorimeter CIE 1976
Flame Rating	-	V-0	-	UL 94
Dielectric Breakdown Voltage	kV/mm	≥7	-	ASTM D149
Weight Loss	%	<1	-	ASTM E595 Modified
Density	g/cm³	2.6	±5%	ASTM D792
Operating Temperature	° C	-50~+150	-	-
Volume Resistivity	Ohm·m	10^{13}	±10%	ASTM D257
Bleeding Width	mm	<3		T-Global Test Method
Tensile Strength @T3.0mm	kgf/cm²	20	-	ASTM D412
Elongation	%	140	-	ASTM D412
Standard Format	-	Sheet	-	-
Hardness	Shore OO	35	±10	ASTM D2240

Low Bleed Series

TG-A1800L Low Bleed Thermal Pad





Low Bleed Series

TG-A3200L Low Bleed Thermal Pad

- 3.2 W/mK Thermal Conductivity
- 35 Shore 00 Hardness
- Low Oil Bleed
- High DBV >7 kV/mm
- Low Thermal Impedance
- Natural Tack

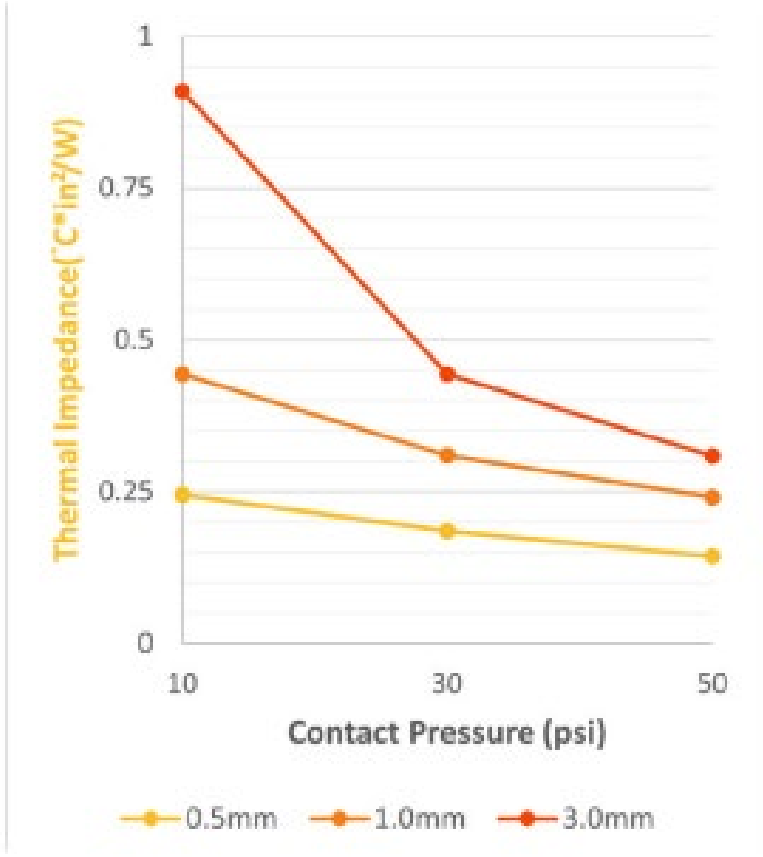
Low Bleed Series

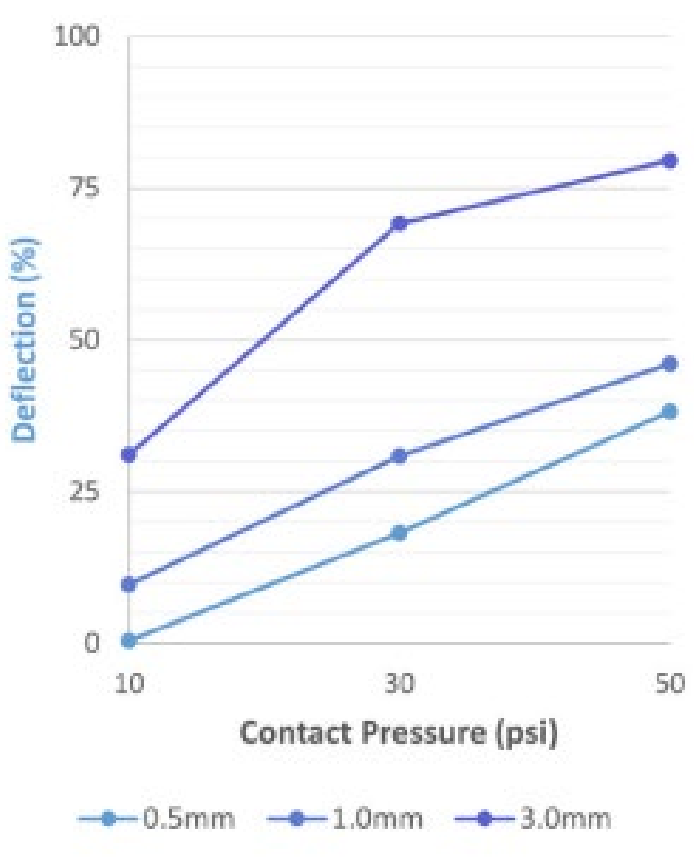
TG-A3200L Low Bleed Thermal Pad

Properties	Unit	TG-A3200L	Tolerance	Test Method
Thermal Conductivity	W/m•K	3.2	±10%	ASTM D5470 Modified
Thickness	mm	0.5~8.0	-	ASTM D374
	inch	0.0197~0.3149	-	ASTM D374
Color	-	Light Gray	-	Colorimeter CIE 1976
Flame Rating	-	V-0	-	UL 94
Dielectric Breakdown Voltage	KV/mm	≥6	-	ASTM D149
Weight Loss	%	<1	-	ASTM E595 Modified
Density	g/cm^3	3	±5%	ASTM D792
Operating Temperature	° C	-50~+150	-	-
Volume Resistivity	Ohm-m	10^{13}	±10%	ASTM D257
Bleeding Width	mm	<3		T-Global Test Method
Tensile Strength @T3.0mm	kgf/cm^2	≥20	-	ASTM D412
Elongation	%	≥120	-	ASTM D412
Standard Format	-	Sheet	-	-
Hardness	Shore OO	35	±10	ASTM D2240

Low Bleed Series

TG-A3200L Low Bleed Thermal Pad





FAQs

Can the Low Bleed Series be reworked?

With care the product can be removed and repositioned without an appreciable loss in thermal performance. However, T-Global strongly recommends that the pads be replaced after use to mitigate the risk of contamination.

What is the shelf-life of the product?

Shelf-life for most thermal pads is one to two years.

Will the pads soften with temperature?

Up to the maximum working temperature, as specified on the individual product datasheet, the materials will not suffer with temperature.

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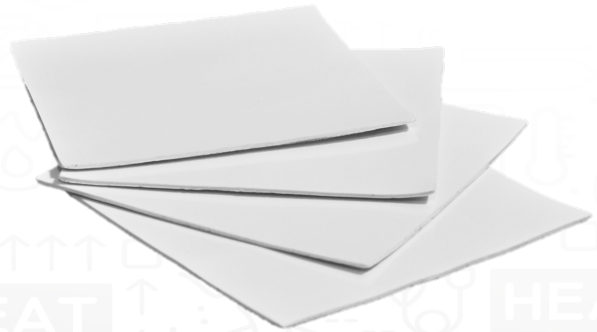
FAQs

Can the Low Bleed Series be supplied in different formats?

The Low Bleed series can be supplied in a range of thicknesses as standard sheets or custom die-cuts parts.

How does the Low Bleed Series respond to ageing and thermal cycling tests?

The series does not exhibit any measurable changes in property when tested using all common industry standard environmental test regimes.



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Summary

- The Low Bleed Series is a silicone-based range of thermal pads from T-Global Technology with advanced oil bleed reduction technology.
- The series offers the design engineer a novel of solution to specifically address migration of silicone oil which can be a significant issue in certain environments.
- Thermal conductivity for the series varies from 1.8 W/mK – 3.2 W/mK.
- Hardness for the series is 35 Shore 00.
- All pads are electrically isolating.
- The series is available as standard sheets or custom die cut parts in thicknesses from 0.5 – 8.0mm.