

# Tflex™ P100 Series Tgard Lined Gap Filler



#### **Product Description**

Laird Tflex P100 is a soft and compliant gap filler with an integrated Tgard liner and adds a complementing performance level to the P series product line from Laird. Laird has leveraged its vast experience and knowledge in the development of thermally conductive materials to develop a soft and compliant gap filler that minimizes contact resistance and board level stresses. In conjunction with these key traits Laird understands that not all applications are the same. As a result, Tflex P100 comes with a unique Tgard liner on one side. This liner provides numerous application benefits like electrical isolation, placement ease during assembly, tear resistance for applications that require shear, to name a few. Tflex P100 will be offered in thicknesses that range from .5mm (.020") up to 5mm (.200").

#### **FEATURES AND BENEFITS**

- Compliant nature minimizes contact resistance
- Integrated Tgard liner provides dielectric strength
- Resistance to burrs and mechanical forces
- Resistant to shear forces.
- Contrasting color allows integration with vision system

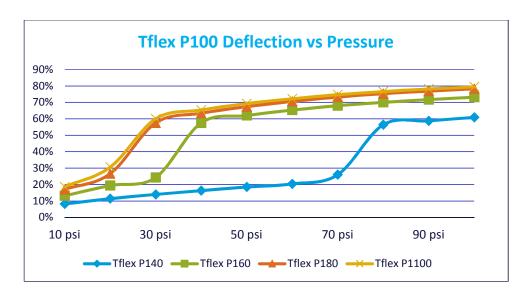
#### **SPECIFICATIONS**

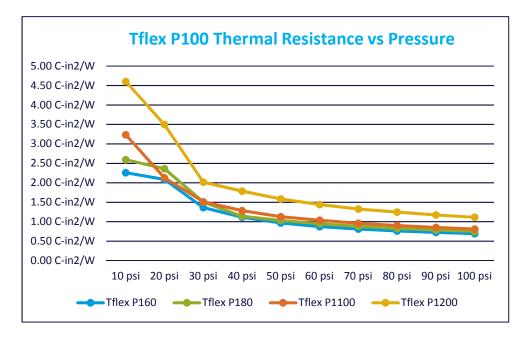
Construction & Composition  Tgard lined elastomer  Yellow  Visual  Thickness Range  0.50mm (0.020") 5.0mm (0.20")  N/A  Thickness Tolerance  +/- 10%  N/A  Thermal Conductivity (W/mK)  Density (g/cc)  2.3  Helium Pycnometer  Hardness (Shore 00)  13  ASTM D2240  Outgassing TML (weight %)  Outgassing CVCM (weight %)  Outgassing CVCM (weight %)  Temperature Range  -40°C to 200°C  Laird Test Method  Rth@ 40 mils, 10 psi  Dielectric Constant @ 1 MHz  7.45  ASTM D150	PROPERTIES	TYPICAL VALUE	TEST METHOD
Thickness Range         0.50mm (0.020") 5.0mm (0.20")         N/A           Thickness Tolerance         +/- 10%         N/A           Thermal Conductivity (W/mK)         1.2         ASTM D5470           Density (g/cc)         2.3         Helium Pycnometer           Hardness (Shore 00)         13         ASTM D2240           Outgassing TML (weight %)         0.32         ASTM E595           Outgassing CVCM (weight %)         0.05         ASTM E595           Temperature Range         -40°C to 200°C         Laird Test Method           Rth@ 40 mils, 10 psi         1.50°C-in2/W         ASTM D5470 (Modified)	Construction & Composition	Tgard lined elastomer	N/A
Thickness Tolerance +/- 10% N/A  Thermal Conductivity (W/mK) 1.2 ASTM D5470  Density (g/cc) 2.3 Helium Pycnometer  Hardness (Shore 00) 13 ASTM D2240  Outgassing TML (weight %) 0.32 ASTM E595  Outgassing CVCM (weight %) 0.05 ASTM E595  Temperature Range -40°C to 200°C Laird Test Method  Rth@ 40 mils, 10 psi 1.50°C-in2/W ASTM D5470  (Modified)	Color	Yellow	Visual
Thermal Conductivity (W/mK)  Density (g/cc)  2.3  Helium Pycnometer  Hardness (Shore 00)  13  ASTM D2240  Outgassing TML (weight %)  O.32  ASTM E595  Outgassing CVCM (weight %)  Temperature Range  -40°C to 200°C  Rth@ 40 mils, 10 psi  1.50°C-in2/W  ASTM D5470  (Modified)	Thickness Range	0.50mm (0.020") 5.0mm (0.20")	N/A
Density (g/cc)  2.3  Helium Pycnometer  Hardness (Shore 00)  13  ASTM D2240  Outgassing TML (weight %)  0.32  ASTM E595  Outgassing CVCM (weight %)  0.05  ASTM E595  Temperature Range  -40°C to 200°C  Laird Test Method  Rth@ 40 mils, 10 psi  1.50°C—in2/W  (Modified)	Thickness Tolerance	+/- 10%	N/A
Hardness (Shore 00) 13 ASTM D2240  Outgassing TML (weight %) 0.32 ASTM E595  Outgassing CVCM (weight %) 0.05 ASTM E595  Temperature Range -40°C to 200°C Laird Test Method  Rth@ 40 mils, 10 psi 1.50°C-in2/W ASTM D5470 (Modified)	Thermal Conductivity (W/mK)	1.2	ASTM D5470
Outgassing TML (weight %) Outgassing CVCM (weight %) Outgassing TML (weight %) Outgassing CVCM (weight %) Ou	Density (g/cc)	2.3	Helium Pycnometer
Outgassing CVCM (weight %)0.05ASTM E595Temperature Range-40°C to 200°CLaird Test MethodRth@ 40 mils, 10 psi1.50°C-in2/WASTM D5470 (Modified)	Hardness (Shore 00)	13	ASTM D2240
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Rth@ 40 mils, 10 psi 1.50°C-in2/W ASTM D5470 (Modified)	Outgassing CVCM (weight %)	0.05	ASTM E595
(Modified)	Temperature Range	-40°C to 200°C	Laird Test Method
	Rth@ 40 mils, 10 psi	1.50°C–in2/W	ASTM D5470
Dielectric Constant @ 1 MHz 7.45 ASTM D150			(Modified)
	Dielectric Constant @ 1 MHz	7.45	ASTM D150
UL Flammability Rating V-0 UL-94	<b>UL Flammability Rating</b>	V-0	UL-94
Volume Resistivity 1.3 x 10 <sup>12</sup> ASTM D257	Volume Resistivity	1.3 x 10 <sup>12</sup>	ASTM D257
Breakdown Voltage >9kV ASTM D149	Breakdown Voltage	>9kV	ASTM D149

Americas: +1.866.928.8181 Europe: +49.(0).8031.2460.0 Asia: +86.755.2714.1166



## Tflex<sup>TM</sup> P100 Series Tgard Lined Gap Filler





#### **AVAILABILITY**

#### STANDARD THICKNESSES

- 0.5mm (0.020") to 5.0mm (0.200") thick material available in 0.25mm (0.010") increments
- Available in standard sheet sizes of 18" x 18" and 9" x 9" or custom die cut parts

#### **PART NUMBER SYSTEM**

Tflex™ indicates Laird elastomeric thermal gap filler product line. P3xxx indicates Tflex P300 product line with thickness in mils (0.001") EXAMPLES:

Tflex™ P140 = 0.040" thick Tflex™ P100 material

#### A17801-00 Tflex P300 DS 12617

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### **Laird Performance Materials:**

<u>A17712-10</u> <u>A17712-11</u> <u>A17712-12</u> <u>A17712-13</u> <u>A17712-14</u> <u>A17712-15</u> <u>A17712-16</u> <u>A17712-17</u> <u>A17712-18</u>

<u>A17712-19</u> <u>A17712-20</u> <u>A17733-10</u> <u>A17733-11</u> <u>A17733-12</u> <u>A17733-13</u> <u>A17733-14</u> <u>A17733-15</u> <u>A17733-16</u> <u>A17733-16</u> <u>A17733-18</u>