

Thermal Solutions

P-THERM® Thermal Management Materials
PS-264X Product Guide

The information provided in these technical data sheets is provided for reference only. All statements, recommendations and technical information are based upon tests we believe to be accurate and reliable. Polymer Science cannot assume responsibility for test results reported by other labs outside of our control as test methods may vary. The user, through his or her own testing, is responsible for making the final product selection assuring all performance, safety and warning requirements are met and the product is suitable for its intended use. Polymer Science disclaims all warranties, expressed or implied, including warranties of marketability or fitness for a particular use.

OUR SOLUTIONS

Polymer Science is dedicated to being the most innovative thermal management material supplier in the world. We are excited to launch our newly formulated, improved performance P-THERM® thermal gap filler materials. Our new gap fillers offer many features that are required in today's evolving electronics market including:

- Economical and more cost effective
- Low outgassing
- Low leaching

Our diverse team of highly skilled engineers and technical staff, in conjunction with our state-of-the-art equipment, provide you with a quality product that is consistent with your application requirements.

Our design team works quickly to provide the solutions you need, allowing your project to expeditiously move from conception to commercialization giving you the edge to ensure your next project is a success.





PS-264I

Product Description:

P-THERM® PS-264I is a silicone based thermally conductive gap filler with an embedded fiberglass support and 125 micron removable polyester carrier.

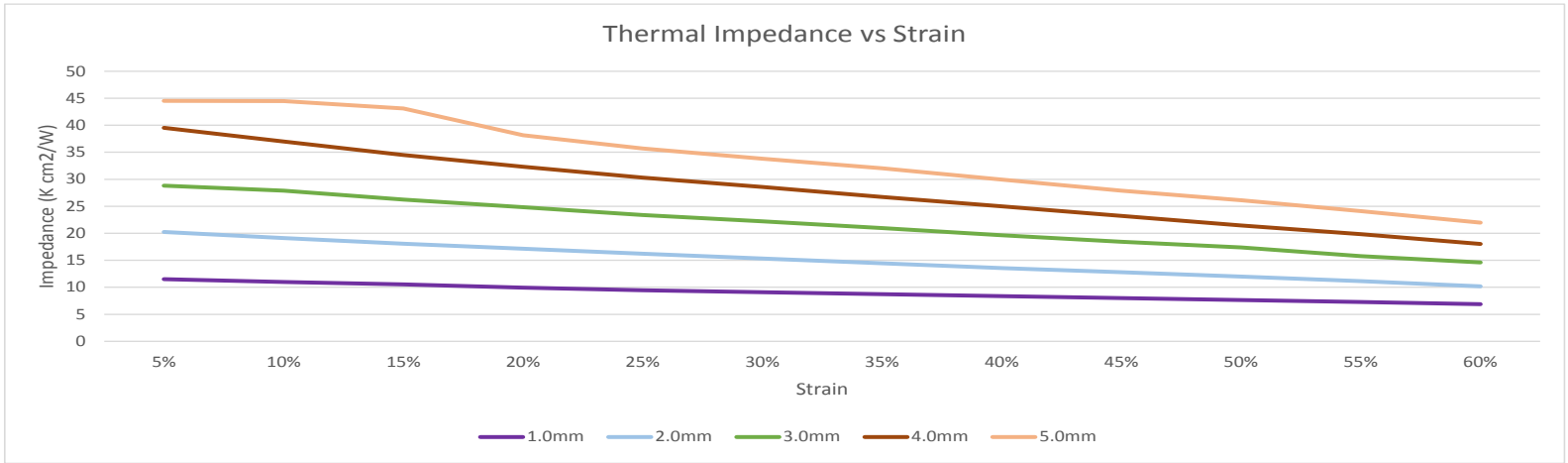
Construction / Properties:

General	Property	Value	Test Method
	Color	Dark Gray	Visual
	Thickness Range	0.5 mm - 5.0 mm	ASTM D374
	Carrier Type	Polyester Film	--
	Carrier Thickness	125 micron	--
	Density (g/cc)	1.82	ASTM D792
	Heat Capacity (J/g K)	0.974	ASTM E1269
	Hardness (Shore 00)	22	ASTM D2240
	Total Mass Loss (@ 125 C/24 hrs)	0.15%	ASTM E595**
	Flammability Rating	V-0	UL 94
	Continuous Use Conditions (C)	-40 - 200	QSP-754

Electrical	Property	Value	Test Method
	Dielectric Breakdown Strength (kV/mm)	12	ASTM D149
	Volume Resistivity (ohm-meter)	1.00E+09	ASTM D257

Thermal	Property	Value			Test Method
	Thermal Conductivity	1 W/m K			ASTM D5470*
	Thermal Performance vs. Strain				
	Deflection (% Strain)	10	20	30	ASTM D5470***
	Thermal Impedance (K cm²/W) @ 1mm	10.99	9.94	9.08	

* Thermal conductivity tested at 20% strain.
** Tested at atmospheric pressure
*** Values tested include interfacial thermal resistance: Application performance is directly related to surface roughness, flatness and pressure applied.

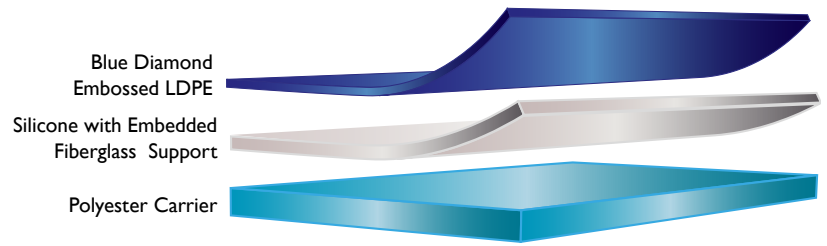


Features:

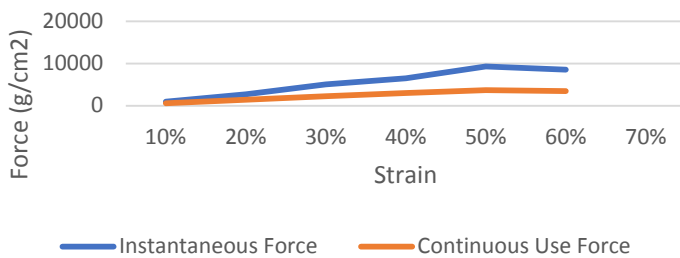
- Good Thermal Conductivity
- Excellent Compression Characteristics
- Excellent Wet-Out
- Superb Flexibility
- Excellent Converting Properties
- RoHS and HF Compliant

Applications:

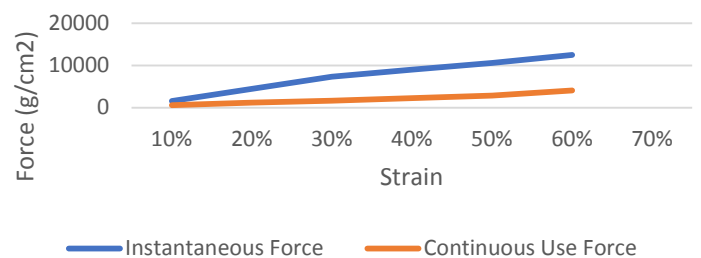
- LED Lighting
- Battery Components
- Infotainment Modules
- Smartphones
- Tablets
- Computers
- Digital Personal Assistants
- Automotive Lighting



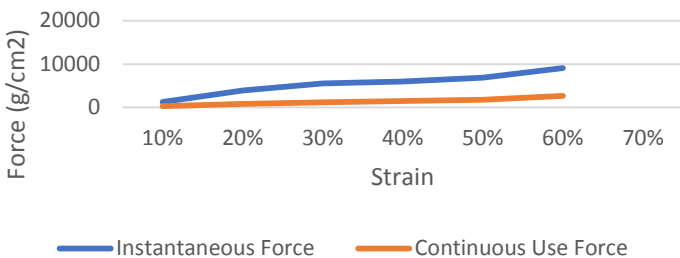
0.5mm Compression Force Deflection



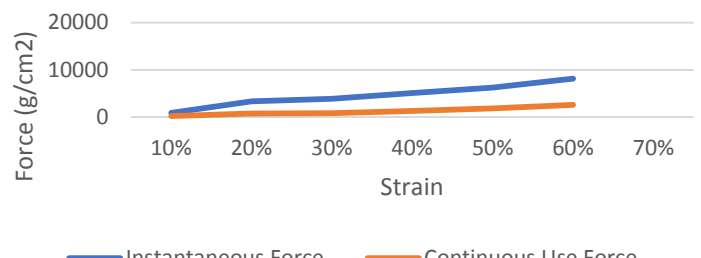
1.0mm Compression Force Deflection



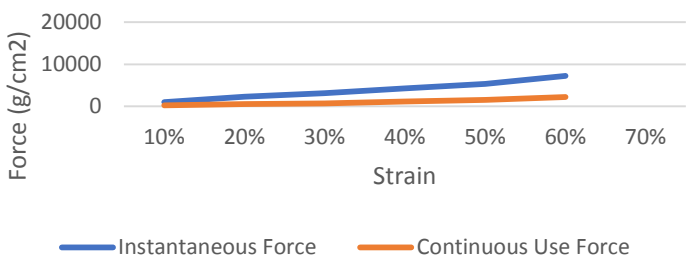
1.5mm Compression Force Deflection



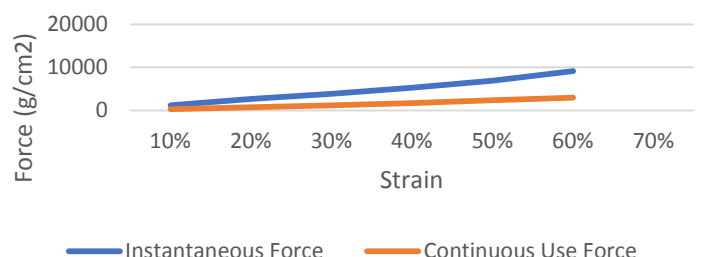
2.0mm Compression Force Deflection



2.5mm Compression Force Deflection



3.0mm Compression Force Deflection



PS-2642

Product Description:

P-THERM® PS-2642 is a silicone based thermally conductive gap filler with an embedded fiberglass support and 125 micron removable polyester carrier.

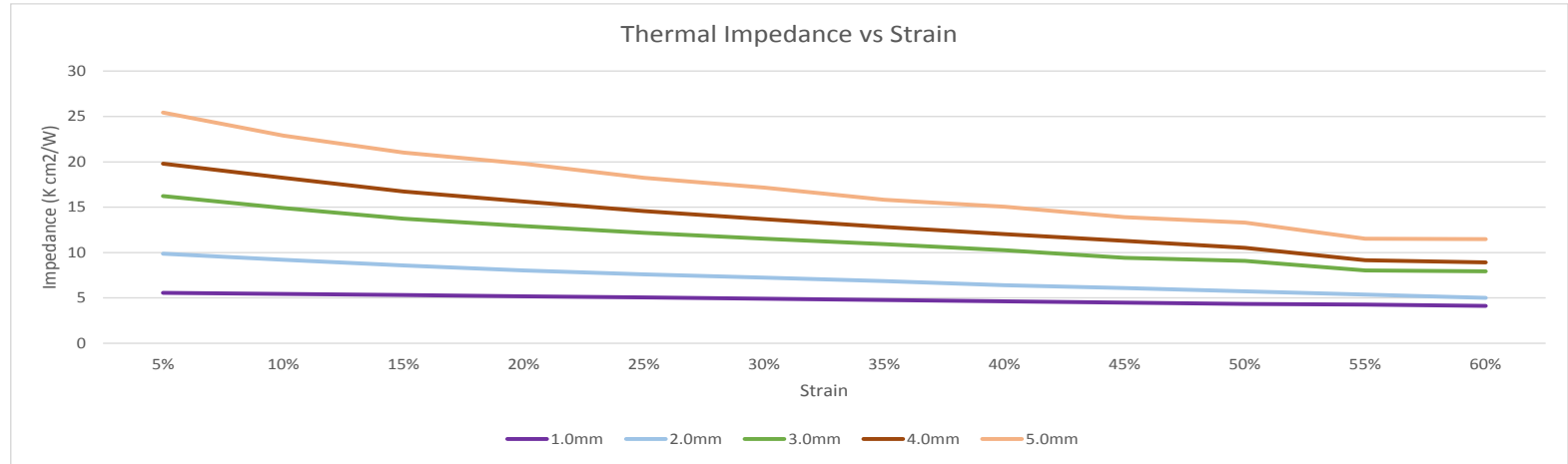
Construction / Properties:

General	Property	Value			Test Method
	Color	Light Blue			Visual
	Thickness Range	0.5 mm - 5.0 mm			ASTM D374
	Carrier Type	Polyester Film			--
	Carrier Thickness	125 micron			--
	Density (g/cc)	2.43			ASTM D792
	Heat Capacity (J/g K)	1.083			ASTM E1269
	Hardness (Shore 00)	47			ASTM D2240
	Total Mass Loss (@ 125C/24hrs)	0.08%			ASTM E595**
	Flammability Rating	V-0			UL 94
	Continuous Use Conditions (C)	-40 - 200			QSP-754

Electrical	Property	Value			Test Method
	Dielectric Breakdown Strength (kV/mm)	20			ASTM D149
	Volume Resistivity (ohm-meter)	1.00E+11			ASTM D257

Thermal	Property	Value			Test Method
	Thermal Conductivity	2 W/m K			ASTM D5470*
	Thermal Performance vs. Strain				
	Deflection (% Strain)	10	20	30	ASTM D5470***
	Thermal Impedance (K cm²/W) @ 1mm	5.45	5.18	4.91	

* Thermal conductivity tested at 20% strain.
** Tested at atmospheric pressure
*** Values tested include interfacial thermal resistance: Application performance is directly related to surface roughness, flatness and pressure applied.

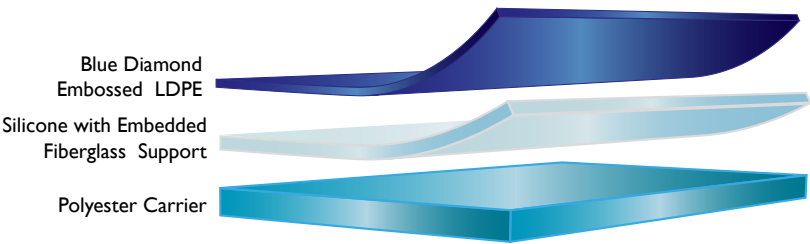


Features:

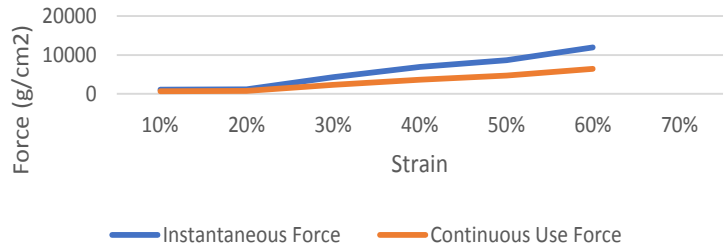
- Good Thermal Conductivity
- Excellent Compression Characteristics
- Excellent Wet-Out
- Superb Flexibility
- Excellent Converting Properties
- RoHS and HF Compliant
-

Applications:

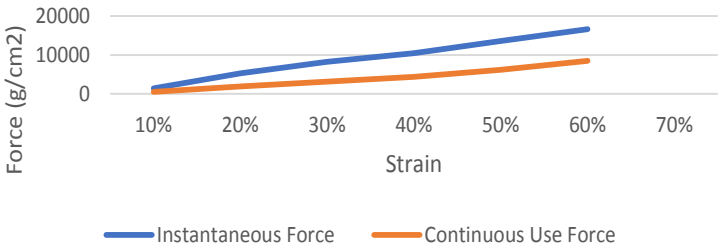
- LED Lighting
- Battery Components
- Infotainment Modules
- Smartphones
- Tablets
- Computers
- Digital Personal Assistants
- Automotive Lighting



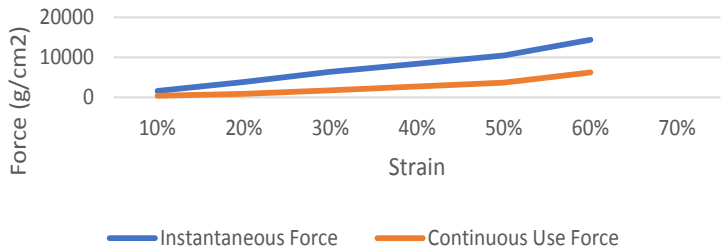
0.5mm Compression Force Deflection



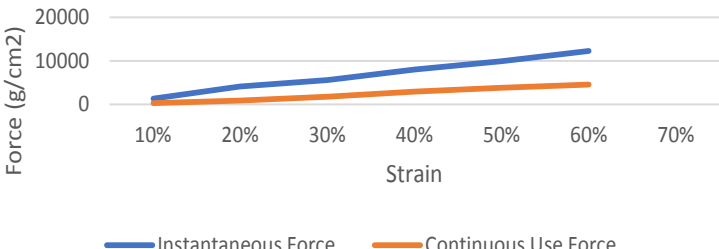
1.0mm Compression Force Deflection



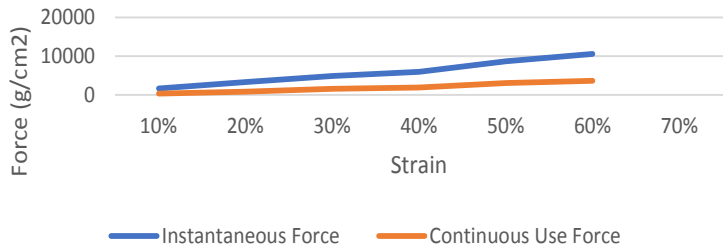
1.5mm Compression Force Deflection



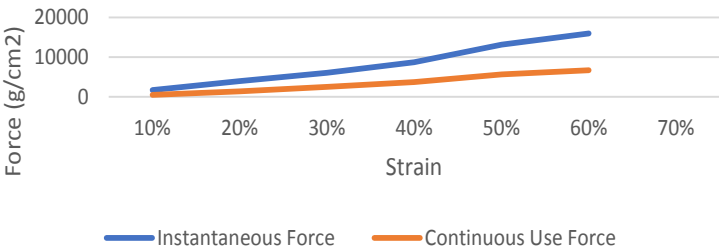
2.0mm Compression Force Deflection



2.5mm Compression Force Deflection



3.0mm Compression Force Deflection



PS-2643

Product Description:

P-THERM® PS-2643 is a silicone based thermally conductive gap filler with an embedded fiberglass support and 125 micron removable polyester carrier.

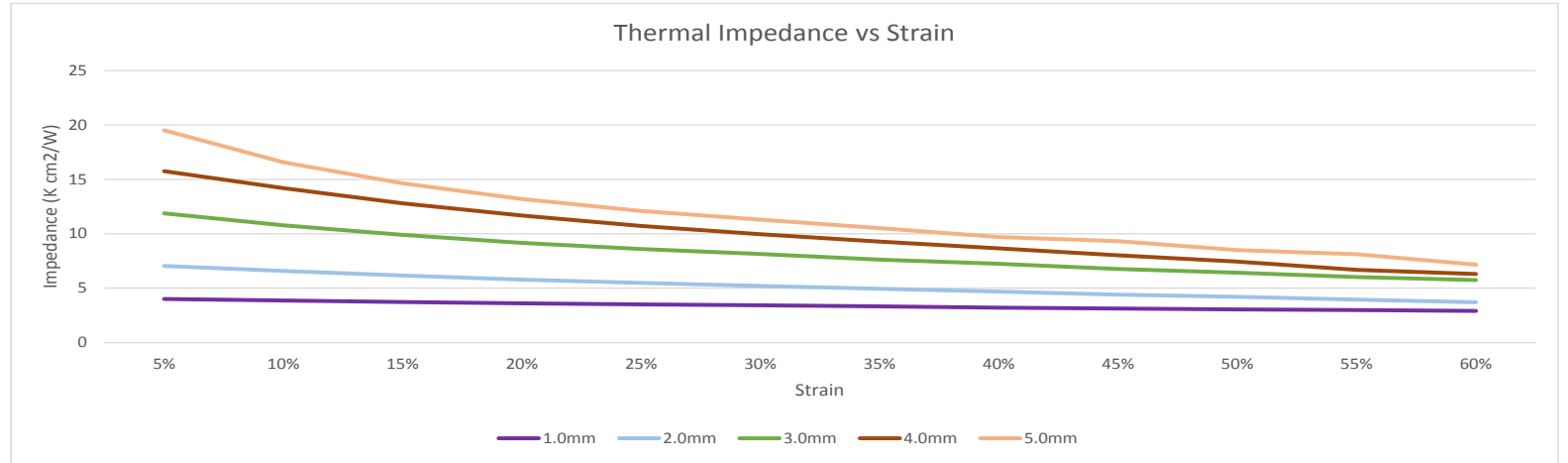
Construction / Properties:

General	Property	Value	Test Method
	Color	Green	Visual
	Thickness Range	0.5 mm - 5.0 mm	ASTM D374
	Carrier Type	Polyester Film	--
	Carrier Thickness	125 micron	--
	Density (g/cc)	2.73	ASTM D792
	Heat Capacity (J/g K)	0.661	ASTM E1269
	Hardness (Shore 00)	41	ASTM D2240
	Total Mass Loss (@125 C/24 Hrs)	0.09%	ASTM E595**
	Flammability Rating	V-0	UL 94
	Continuous Use Conditions (C)	-40 - 200	QSP-754

Electrical	Property	Value	Test Method
	Dielectric Breakdown Strength (kV/mm)	13	ASTM D149
	Volume Resistivity (ohm-meter)	1.00E+11	ASTM D257

Thermal	Property	Value			Test Method
	Thermal Conductivity	3 W/m K			ASTM D5470*
	Thermal Performance vs. Strain				
	Deflection (% Strain)	10	20	30	ASTM D5470***
	Thermal Impedance (K cm²/W) @ 1mm	3.87	3.62	3.43	

* Thermal conductivity tested at 20% strain.
** Tested at atmospheric pressure
*** Values tested include interfacial thermal resistance: Application performance is directly related to surface roughness, flatness and pressure applied.

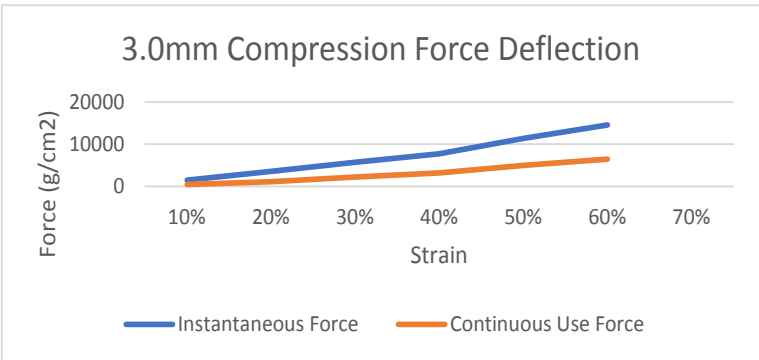
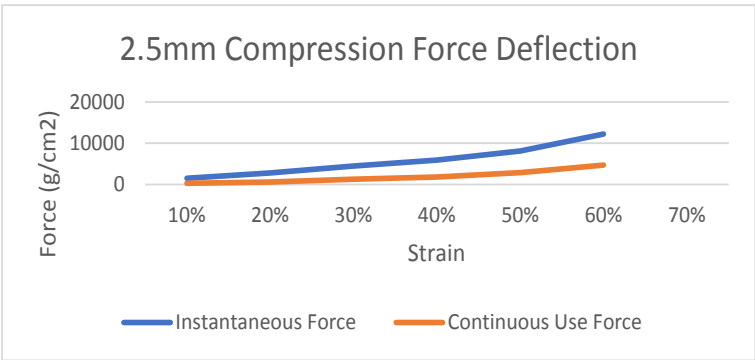
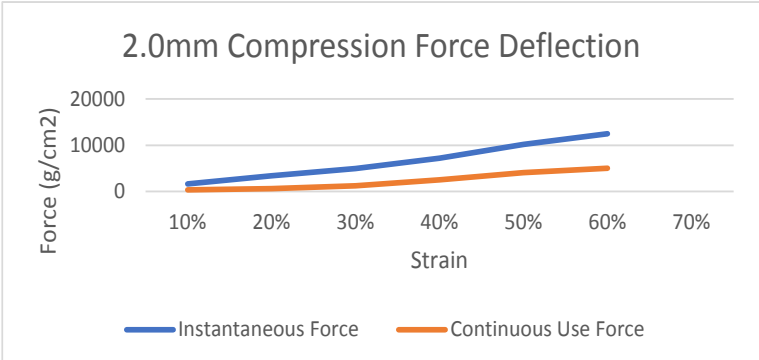
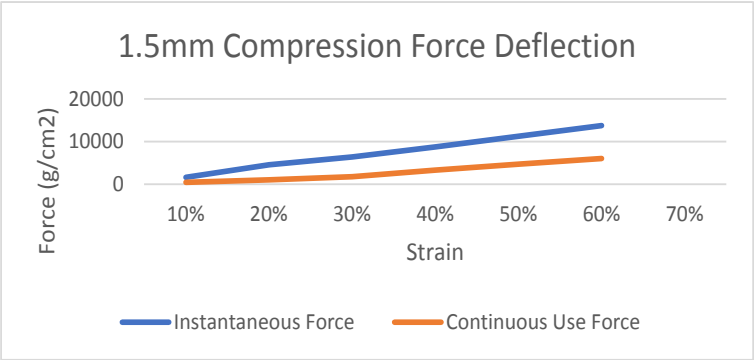
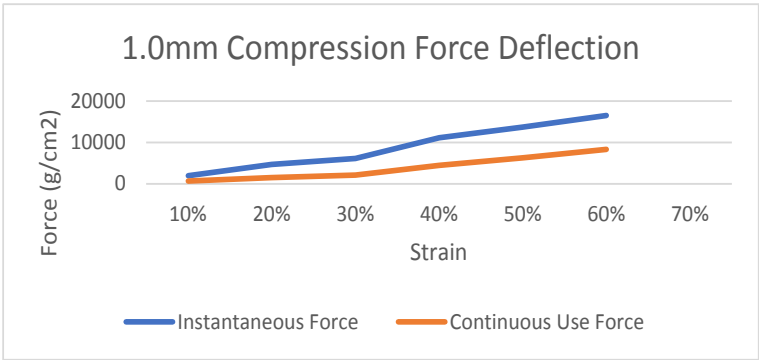
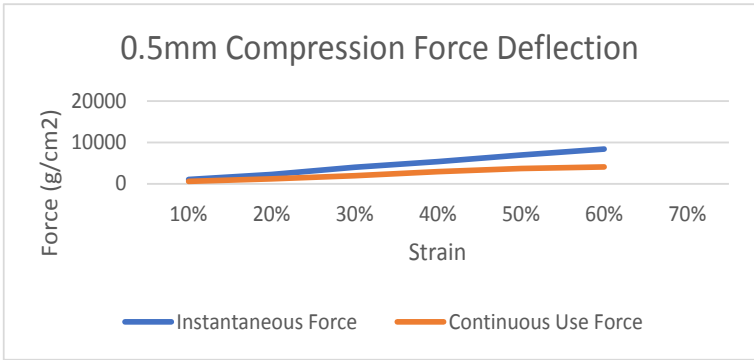
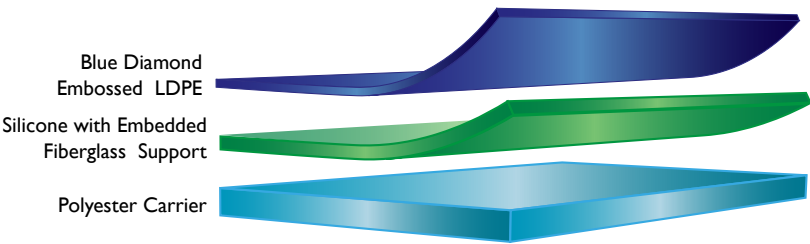


Features:

- Excellent Thermal Conductivity
- Excellent Compression Characteristics
- Good Wet-Out
- Superb Flexibility
- Excellent Converting Properties
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Applications:

- LED Lighting
- Battery Components
- Infotainment Modules
- Smartphones
- Tablets
- Computers
- Digital Personal Assistants
- Automotive Lighting





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