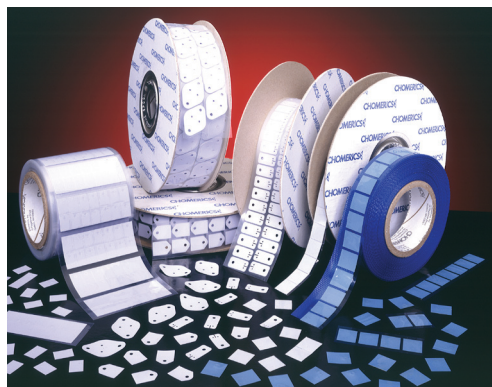


Commercial Grade Thermally Conductive Electrical Insulator Pads



Description

CHO-THERM® Commercial Grade Thermal Insulator Pads are designed for use where solid thermal and electrical properties are required at an economical price. These products are offered as dry pads, or with an optional adhesive (PSA) layer for attachment. Materials with PSA are available die-cut on continuous rolls. Versions are offered with either polyimide or fiberglass reinforcement to protect pads against tear, cut-through and punctures.

Features / Benefits

- Good thermal properties
- Good to excellent dielectric strength
- Excellent mechanical strength and puncture resistance
- Available with and without acrylic PSA
- UL recognized V-0 flammability rating
- Meet RoHS specifications
- Available on continuous rolls for easy peel and stick application

CHO-THERM® Commercial Grade Thermal Insulator Pads								
Properties		T609	T444	1674	T441			Method
Physical	Material	Silicone	Non-silicone	Silicone	Silicone			--
	Color	Lt. Green	Beige	Blue	Pink			Visual
	Reinforcement Carrier	Fiberglass	Kapton® MT	Fiberglass	Fiberglass			Visual
	Thickness, inch (mm)	0.010 (0.25)	0.003 (0.08)	0.010 (0.25)	0.008 (0.20)	0.013 (0.33)	0.018 (0.46)	ASTM D374
	Thickness Tolerance, inch (mm)	0.001 (± 0.025)	0.0005 (± 0.013)	0.001 (± 0.025)	0.001 (± 0.025)	0.001 (± 0.025)	0.001 (± 0.025)	--
	Operating Temperature Range, °F [°C]	-40 to +392 (-40 to +200)	-40 to +392 (-40 to +200)	-40 to +392 (-40 to +200)	-40 to +392 (-40 to +200)	-40 to +392 (-40 to +200)	-40 to +392 (-40 to +200)	--
Thermal	Thermal Impedance, °C-in ² /W [°C-cm ² / W] @ 300 psi*	0.33 (2.1)	0.37 (2.4)	0.41 (2.6)	0.41 (2.6)	0.56 (3.6)	0.64 (4.1)	ASTM D5470
	Thermal Conductivity, W/m-K	1.5	0.4	1.0	1.1	1.1	1.1	ASTM D5470
	Heat Capacity, J/g-°C	1.0	1.0	1.0	1.0	1.0	1.0	ASTM E1296
	Coefficient of Thermal Expansion, ppm/°C	150	400	300	300	300	300	ASTM E831
Electrical	Voltage Breakdown Dry, Vac	4,000	5,000	2,500	8,700	11,400	13,800	ASTM D149
	Voltage Breakdown Wet, Vac	Not Tested	Not Tested	Not Tested	8,100	10,500	12,900	ASTM D149
	Volume Resistivity Dry, ohm-cm	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	ASTM D257
	Volume Resistivity Wet, ohm-cm	Not Tested	Not Tested	Not Tested	10 ¹⁴	10 ¹⁴	10 ¹⁴	ASTM D257
Mechanical	Tensile Strength, psi (Mpa)	3,900 (26.9)	3,000 (20.7)	1,500 (10.3)	2,800 (19.3)	2,500 (17.3)	2,000 (13.8)	ASTM D412
	Tear Strength, lb/in (kN/m)	300 (52.5)	150 (26.3)	100 (17.5)	135 (23.6)	110 (19.3)	70 (12.25)	ASTM D642
	Elongation, %	30	NA	2	40	40	40	ASTM D412
	Hardness, Shore A	70	90	85	80	80	80	ASTM D2240
	Specific Gravity	2.10	1.70	2.45	2.45	2.45	2.45	ASTM D792
Regulatory	Flammability Rating (See UL File E140244)	V-0	V-0	Not Tested	V-0	V-0	V-0	UL94
	RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes	Chomerics Certification
	Outgassing, % TML (%CVCM)	Not Tested	Not Tested	0.45 (0.20)	Not Tested	Not Tested	Not Tested	ASTM E595
	Shelf-Life, months from shipment, Dry Pad (with PSA)	indefinite (6)	(12)	indefinite (12)	indefinite (12)	indefinite (12)	indefinite (12)	Chomerics

KAPTON is a trademark of E.I. DuPont de Nemours and Company.
*Tested without PSA. PSA typically adds 0.05 °C-in²/W (0.30 °C-cm²/W)

CHO-THERM® Commercial Grade Thermal Insulator Pads

Typical Applications

- Power conversion equipment
- Power supplies and UPS
- Power semiconductors
- Automotive electronics
- Motor and engine controllers
- Televisions and consumer electronics

Product Attributes

T609

- Good thermal and dielectric properties
- Economically priced
- Best value for moderate to high performance pad
- PSA version available in economical kiss-cut format on continuous rolls

T441

- Superior dielectric strength (wet and dry)
- Economically priced
- Excellent for outdoor, high-humidity power supplies
- PSA version available in economical kiss-cut format on continuous rolls

1674

- Original commercial grade pad with good thermal and electrical performance
- Available in economical kiss-cut format on continuous rolls (with and without PSA)
- Passes NASA outgassing

T444

- Non-silicone with excellent dielectric and mechanical strength (polyimide interlayer)
- Strong acrylic adhesive (one side)
- Available in economical kiss-cut format on continuous rolls

Handling Information

These products are defined by Chomerics as “articles” according to the following generally recognized regulatory definition for articles:

An article is a manufactured item “formed to a specific shape or design during manufacturing,” which has “end use functions” dependent upon its size and shape during end use and which has generally “no change of chemical composition during its end use.”

In addition:

- There is no known or anticipated exposure to hazardous materials/substances during routine and anticipated use of the product.
- The product’s shape, surface, and design is more relevant than its chemical composition.

These materials are not deemed by Chomerics to require an MSDS. For further questions, please contact Chomerics at 781-935-4850.

Ordering Information

Thermal insulator pads are available in the following formats.

Contact Chomerics for custom widths, part sizes, etc.

Die-cut parts on continuous rolls

Slit rolls starting at 0.5” wide; maximum width is material specific

Custom die-cut parts on sheets, or as individual parts

Part Number:

6W

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XX

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YYYY

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ZZZZ

6W	XX	YYYY	ZZZZ
W = 0 Standard die-cut Part	11 = without PSA 12 = with PSA one side	YYYY = For standard die-cut parts, please see tables on pages 37 to 39	ZZZZ = Material class (1674, T441, T444, T609)
W = 4 Roll Stock	10 = 100 ft Roll Stock 40 = 400 ft Roll Stock	0075 = 0.75 in 0100 = 1.00 in 0150 = 1.50 in 0200 = 2.00 in	
W = 6 Roll Stock with PSA		1150 = 11.5 in. 2400 = 24 in. [T444*] 0800 = 8 in. 1600 = 16 in. [1674*] 1100 = 11 in. 2200 = 22 in. [T441*]	
W = 9 Custom die-cut part	11 = without PSA 12 = with PSA one side	YYYYY = Custom Part Number. Contact Chomerics	

* Standard bulk roll width