

# TRM™ TECHNOLOGY

Take your brand to the next level with XO-NANO Thermal Regulating Materials

## KEY TAKEAWAY

XO-Nano TRM™ Technology sets the standard for thermal conductivity and effusivity in premium comfort products.

## TARGET APPLICATION

Mattress surface layers and toppers, molded & shredded pillows and other comfort surfaces.

## LONG-TERM COMFORT

Thermally conductive pathways are built into the foam, allowing heat to consistently move through the foam, eliminating heat build up. Heat transfer is enhanced two to three times that of standard memory foam.

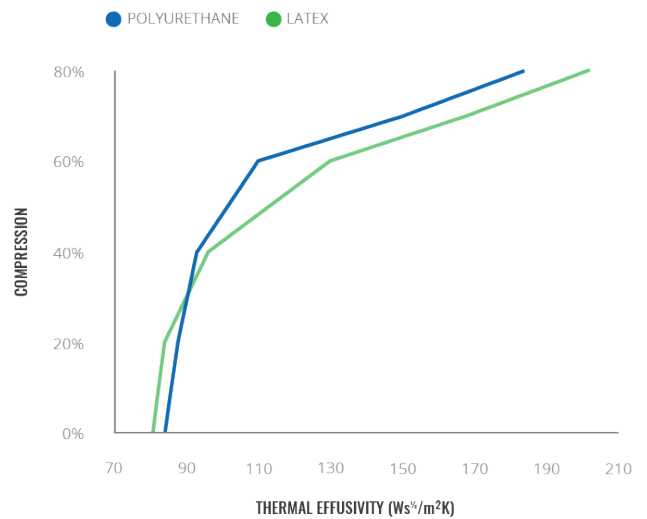
## COMPRESSION IS A GOOD THING

Thermal conductivity and effusivity increases an additional 50% with compression, counteracting the reduction of airflow and convective heat flow associated with foam compression.

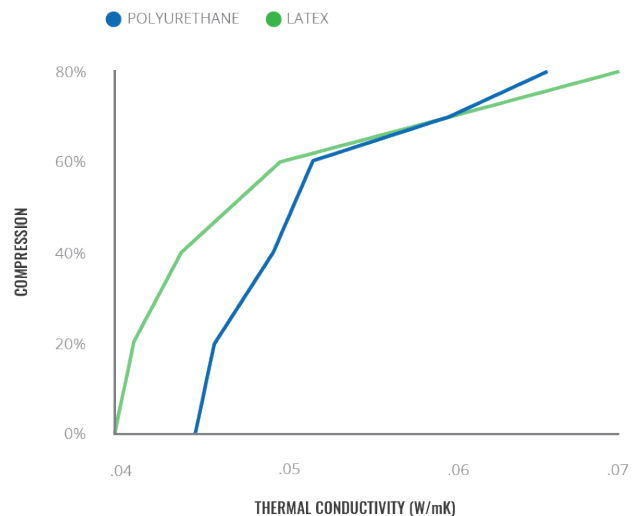
## READILY AVAILABLE

XO-nano TRM™ Technology is now available in polyurethane and latex foams with production in North America and Europe.

## THERMAL EFFUSIVITY



## THERMAL CONDUCTIVITY



## POLYURETHANE TECHNICAL DATA

PROPERTY	UNITS	RESULTS	STANDARD
Density	kg/m <sup>3</sup>	56	ASTM D3574 A
IFD at 24% Deflection	N	58	ASTM D3574 B1
90% Compression	% Loss	< 10%	ASTM D3574 D
Elongation	%	96%	ASTM D3574 E
Tensile Strength	kPa	21.3	ASTM D3574 E
Tear Strength	n/M	158	ASTM D3574 F
Airflow	L/min	17.2	ASTM D3574 G
Recovery	s	2.9	ASTM D3574 M
Thermal Conductivity at 0%, 40%, 80% Compression	W/mK	0.046, 0.049, 0.068	*
Thermal Effusivity at 0%, 40%, 80% Compression	Ws <sup>1/2</sup> /m <sup>2</sup> k	83.7, 99.8, 180.6	*

## LATEX TECHNICAL DATA

PROPERTY	UNITS	RESULTS	STANDARD
Density	kg/m <sup>3</sup>	65	ASTM D3574 A
IFD at 24% Deflection	N	53 / 47**	ASTM D3574 B1
90% Compression	% Loss	< 5%	ASTM D3574 D
Elongation	%	250	ASTM D3574 E
Tensile Strength	kPa	53.8	ASTM D3574 E
Tear Strength	N/m	210	ASTM D3574 F
Thermal Conductivity at 0%, 40%, 80% Compression	W/mK	0.041, 0.045, 0.071	*
Thermal Effusivity at 0%, 40%, 80% Compression	Ws <sup>1/2</sup> /m <sup>2</sup> k	81.8, 102.4, 200.2	*

\*All testing was performed with a HotDisk M1 Thermal Conductivity Meter.

\*\*Non-perforated / perforated

### ABOUT US

At XO-NANO, we invent additive blends that change the properties of virtually any type of foam down to the quantum level. Our technology ranges from enhanced thermal conductivity, to impact and pressure sensing. We work with product designers to reinvent their next generation of products with increased comfort and sensing capabilities. We are changing what foam can do and driving new growth in an old industry.

### CONTACT US

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