



INNOVATIONS FOR LIVING®

# TYPICAL PHYSICAL PROPERTIES OF OWENS CORNING

INSULATION PHYSICAL PROPERTIES											
FOAMULAR® EXTRUDED POLYSTYRENE RIGID INSULATION								HIGH DENSITY SERIES			
PROPERTIES	ASTM Method	FOAMULAR® INSULPINK®	FOAMULAR® C-200 Cel-Lok® System <sup>(2)</sup>	FOAMULAR® CodeBord®	FOAMULAR® C-200 <sup>(2)</sup>	FOAMULAR® THERMAPINK®	FOAMULAR® C-300	FOAMULAR® 400	FOAMULAR® 600	FOAMULAR® 1000	FOAMULAR® 350
THERMAL RESISTANCE <sup>(1)</sup> ft <sup>2</sup> hr °F/BTU (m <sup>2</sup> °C/W)	C518 C177	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)
COMPRESSIVE STRENGTH, min. psi (kPa)	D1621	20 <sup>(3)</sup> (140)	20 <sup>(3)</sup> (140)	20 <sup>(3)</sup> (140)	20 <sup>(3)</sup> (140)	20 <sup>(3)</sup> (140)	30 <sup>(3)</sup> (210)	40 <sup>(4)</sup> (275)	60 <sup>(4)</sup> (415)	100 <sup>(4)</sup> (690)	35 <sup>(4)</sup> (240)
COMPRESSIVE MODULUS: psi (kPa)	D1621	1000 (6895)	1000 (6895)	1000 (6895)	1000 (6895)	1000 (6895)	1350 (9308)	2000 (13789)	2700 (18616)	3700 <sup>(5)</sup> 25510 <sup>(5)</sup>	1480 (10204)
WATER ABSORPTION, max. (% by volume)	D2842	0.70	0.70	0.70	0.70	0.70	0.70	0.60	0.55	0.50	0.70
WATER VAPOUR PERMEANCE, typical perms (ng/Pa.s.m <sup>2</sup> )	E96	0.90 (52)	0.90 (52)	0.90 (52)	0.90 (52)	0.90 (52)	0.87 (50)	0.87 (50)	0.87 (50)	0.87 (50)	0.87 (50)
WATER CAPILLARITY	–	None	None	None	None	None	None	None	None	None	None
WATER AFFINITY	–	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic
FLEXURAL STRENGTH, typical psi (kPa)	C203	60 (414)	60 (414)	60 (414)	60 (414)	60 (414)	75 (517)	115 (793)	140 (965)	150 (1034)	80 (552)
LINEAR COEFFICIENT OF THERMAL EXPANSION in/in/°F (mm/mm/°C)	E228	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )	3.5 × 10 <sup>-5</sup> (6.3 × 10 <sup>-5</sup> )
DIMENSIONAL STABILITY, max. (% linear change)	D2126	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
MAXIMUM OPERATING TEMP. °F (°C)	– –	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)
LIMITING OXYGEN INDEX, min.	min. D2863	24	24	24	24	24	24	24	24	24	24
Thermal Resistance: ft <sup>2</sup> hr °F/BTU; (m <sup>2</sup> °C/W)											
@75 °F (24 °C)		5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)	5.0 (0.88)
@40 °F (4.4 °C)		5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)	5.4 (0.95)
@25 °F (-4 °C)		5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)	5.6 (0.99)

(1) Thermal resistance for 1 inch (25mm) thickness (2) C-200 and Cel-Lok® System have the same properties (3) At 10% deformation or yield (4) At 5% deformation or yield (5) Value for 2" (50 mm) thickness

### Codes & Standards Compliance:

- Meets Montreal Protocol 2010, CFC, HCFC Free
- Zero Ozone Depletion Potential
- 70% Less Global Warming Potential\*

STANDARD SIZES <sup>(1)</sup>	THERMAL RESISTANCE (ft <sup>2</sup> hr °F/BTU) (m <sup>2</sup> °C/W) (for listed thickness)	FOAMULAR® INSULPINK®	FOAMULAR® C-200 Cel-Lok® System <sup>(2)</sup>	FOAMULAR® CodeBord®	FOAMULAR® C-200 <sup>(2)</sup>	FOAMULAR® THERMAPINK®	FOAMULAR® C-300	FOAMULAR® 400	FOAMULAR® 600	FOAMULAR® 1000	FOAMULAR® 350 <sup>(2)</sup>
1" x 24" x 96" (25mm x 610mm x 2438mm)	R-5 (RSI 0.88)			x†	x		x	x	x		
1.5" x 24" x 96" (38mm x 610mm x 2438mm)	R-7.5 (RSI 1.32)		x	x†	x		x	x	x		x
2" x 24" x 96" (51mm x 610mm x 2438mm)	R-10 (RSI 1.76)	x	x	x†	x	x	x	x	x	x	x
2.5" x 24" x 96" (64mm x 610mm x 2438mm)	R-12.5 (RSI 2.20)	x			x		x				x
3" x 24" x 96" (76mm x 610mm x 2438mm)	R-15 (RSI 2.64)	x			x		x	x	x		x
3.25" x 24" x 96" (83mm x 610mm x 2438mm)	R-16.25 (RSI 2.86)	x				x					
3.5" x 24" x 96" (89mm x 610mm x 2438mm)	R-17.5 (RSI 3.08)						x				
4" x 24" x 96" (102mm x 610mm x 2438mm)	R-20 (RSI 3.52)				x	x	x	x			x
0.8" x 48" x 96" or 108" or 120" (20mm x 1219mm x 2438mm or 2743 or 3048)	R-4 (RSI 0.70)			x							
1" x 48" x 96" or 108" or 120" (20mm x 1219mm x 2438mm or 2743 or 3048)	R-5 (RSI 0.88)			x							
1.5" x 48" x 96" or 108" (38mm x 1219mm x 2438mm or 2743mm)	R-7.5 (RSI 1.32)			x							
2" x 48" x 96" or 108" (51mm x 1219mm x 2438mm or 2743mm)	R-10 (RSI 1.76)			x							
CAN/ULC-S701		Type 3	Type 3	Type 3	Type 3	Type 3	Type 4	Type 4	Type 4	Type 4	Type 4
CCMC Evaluation No.		I3431-L	I3431-L	I3431-L	I3431-L	I3431-L	I3430-L				I3430-L

<sup>(1)</sup> Enquiries on non-standard sizes are welcome <sup>(2)</sup> Standard sizes for FOAMULAR® C-200 and 350 are thickness by 24" x 48" † Available in Quebec only.

### Notes

- Certified Performance – Owens Corning Canada LP will provide test certification for published physical properties pertaining to our FOAMULAR® insulation products.
- Jobsite Handling – To protect FOAMULAR® insulation and to prevent discolouration and/or surface deterioration caused by excessive exposure to direct sunlight, it is recommended that in exterior applications, the product be covered as soon as practicable.
- Vapour Retarders – Assemblies should be evaluated for effectiveness and location of vapour retarders to avoid condensation and subsequent damage to structures. Vapour retarders shall be chosen and applied in accordance to applicable Codes for desired assembly.
- Air and Water Infiltration – All air and water infiltration requirements for a designed assembly shall conform to applicable Building Codes.
- Flame Spread Classification – ULC flame spread classification of greater than 25 and less than 500 according to CAN/ULC-S102.2 (tunnel floor test).
- Warning - Combustible – FOAMULAR® insulation is combustible and can be a fire hazard if improperly used or installed. Though they contain a flame retardant to inhibit ignition they will ignite if exposed to fire of sufficient intensity. Do not expose them to open flame or other ignition sources during shipping, handling, storage, installation or use.
- Interior Protection – When used in buildings for human occupancy, FOAMULAR® insulation must be protected by a minimum 1/2" (12.7mm) thick gypsum board, or approved equal, covering surfaces exposed after installation. Boards must be mechanically fastened in place as prescribed by the applicable Building Code.
- Adhesives/Sealants – Some of these products contain solvents that attack polystyrene insulation. Consult manufacturer to verify the chemical compatibility of solvents/sealants with FOAMULAR® insulation.
- Chemicals – FOAMULAR® insulation has good chemical resistance to many acids, caustics, salts, cements and mortars and poor resistance to some hydrocarbons and a number of other petroleum derivatives. Be sure to check with the supplier of the item regarding chemical compatibility.

Notice: We trust the information given herein will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification. Please read all statements, recommendations or suggestions in conjunction with out conditions of sale which apply to all materials supplied by us. We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of our material is not in accordance with our current printed instructions or for other than their intended use. Our liability is expressed limited to replacement of defective goods. Any claim shall be deemed waived unless made to us in writing within thirty (30) days from the date when the basis for it was, or reasonably should have been, discovered.



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