

# OPCORE® Physical Properties

Nominal Rigid Foam Density in lbs/cubic foot

Property	Method	Units	0.90	1.15	1.35	1.8	2.4	3.0
Sustainability / Environmental	<i>Opco, Inc.</i>		Recyclable as #6 Plastic. Can reduce carbon emissions as a result of lower energy load for heating and cooling buildings, or refrigeration of package contents. Can contain recycled content per specification. Retains R-value over time. Does not contain chlorofluorocarbons. UL GreenGuard Gold Certified for Indoor Air Quality. Material expansion agent has zero ozone depletion potential.					
ASTM C578 Classification <sup>(1)</sup>	ASTM C578	Type	I	VIII	II	IX	XIV	XV
Compressive Resistance	ASTM D1621	at yield or 10% deformation in psi (kPa)	10 (69)	13 (90)	15 (104)	25 (173)	40 (276)	60 (414)
Thermal Resistance (R-value*), 75F <sup>(2)</sup>	ASTM C518	°F•ft <sup>2</sup> •h/BTU (K•m <sup>2</sup> /W) 75 ±2°F (23.9 ±1°C)	3.6	3.8	4.0	4.2	4.2	4.3
Thermal Resistance (R-value*), 40F <sup>(2)</sup>	ASTM C518	°F•ft <sup>2</sup> •h/BTU (K•m <sup>2</sup> /W) 40 ±2°F (4.4 ±1°C)	3.9	4.2	4.3	4.5	4.6	4.6
Thermal Resistance (R-value*), 25F <sup>(2)</sup>	ASTM C518	°F•ft <sup>2</sup> •h/BTU (K•m <sup>2</sup> /W) 25 ±2°F (-3.9 ±1°C)	4.1	4.3	4.4	4.6	4.7	4.7
Flexural Strength	ASTM C203	psi (kPa)	25 (173)	30 (208)	35 (240)	50 (345)	60 (414)	75 (517)
Water Vapor Permeance <sup>(3)</sup>	ASTM E96	For 1" (25.4 mm), perm (ng/PA•s•m <sup>2</sup> ), max	5.0	3.5	3.5	2.5	2.5	2.5
Water Absorption by Total Immersion	ASTM C272	Volume % absorbed, max	4.0	3.0	3.0	2.0	2.0	2.0
Dimensional Stability	ASTM D2126	max % linear change	< 2.0					
Oxygen Index	ASTM D2863	min, volume %	> 24					
Surface Burning Characteristics	ASTM E-84 or UL 723	Flame Spread / Smoke Developed	Flame Spread <25, Smoke Developed <450					
Biological Behavior			Will not support growth of mold or mildew. No harmful effects on health known.					
Chemical Resistance			Insensitive to water, the majority of acids and alkalis; sensitive to organic solvents.					
Application Limiting Temperature		° F / ° C	165 (73.9) nominal / 180 (82.2) max					

<sup>(1)</sup> OPCORE meets and/or exceeds ASTM C578-11b "Standard Specification For Preformed, Cellular Polystyrene Insulation"; published by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

<sup>(2)</sup> R-value means resistance to heat flow. The higher the R-value, the greater the insulating power. Ask your seller for the fact sheet on OPCORE R-values. The R-value properties are based on 1 in thickness.

<sup>(3)</sup> Values quoted are maximum values for 1 inch (25mm) thick samples and are based upon most recent raw material product quality audit data. Actual water vapor permeance data decreases as thickness increases. Where water vapor permeance is a design concern, use of the product is subject to professional engineering review at the specifier's option.

\* The higher the R-value, the greater the insulating power. The physical property data shown above are presented as typical average values as determined by industry accepted and standard test methods, except where noted, and are subject to normal manufacturing variation. ASTM specifications shown are typical for rigid, cellular polystyrene thermal insulation and are published by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.



**Opco, Inc.**  
 205 W Harrison Avenue  
 Latrobe, PA 15650  
 Tel: 724.537.9300 / 800.229.6726  
 Fax: 724.537.9349  
 www.opcodirect.com



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