

OPCO Inc.

OPCORE

Thermal Insulation Cores for Structural Insulated Panels

OPCORE G

800.229.6726

opcodirect.com





Award Winning Hudson Passive House
 Claverack, New York | Architect Dennis Wedlick
 OPCORE-G SIP Core for Wall SIPs R-50
 OPCORE-G SIP Core for Roof SIPs R-50

Experience.

BASF
 Environmental
 Education Center
 Rensselaer, New York

OPCORE-G SIP Core
 for Wall SIPs
 R-36

OPCORE-G Rigid Foam
 Radiant Floor
 R-20





OPCO is a proud member of SIPA.

The Structural Insulated Panel Association (SIPA) is a non-profit trade association representing manufacturers, suppliers, dealer/distributors, design professionals, and builders committed to providing quality structural insulated panels for all segments of the construction industry.

www.sips.org

Quality.

ICC-ES Technical Evaluations for
OPCORE and OPCORE-G Rigid Foam
<https://icc-es.org/report-listing/esr-1464/>
<https://icc-es.org/report-listing/esr-4522/>



SIP Core
Manufacturing
Expertise

Rigid Foam
Quality Control



ICC
EVALUATION
SERVICE®

A good infield keeps
three bases covered.

We combined our SIP Core
manufacturing expertise
(base 1) with a quality
control program (base 2)
that includes auditing to
ensure compliance with
product performance and
quality metrics defined by
technical evaluations of
our building products by
the most widely accepted
evaluation agency in the
nation (base 3).

The result?

Just dimensionally
accurate SIP Cores in your
SIP press!



High Quality EPS Rigid Foam

Physical Property	Method	Units	Material Property Values					
Density, nominal	ASTM C303	lbs / ft ²	1.00	1.25	1.50	2.00	2.50	3.00
Density, minimum	ASTM C303	lbs / ft ²	0.90	1.15	1.35	1.80	2.40	3.00
Sustainability / Environmental	Summarized conclusions from scientific experiments in the public domain or product specification.	<ul style="list-style-type: none"> • Recyclable as #6 Plastic. • Can reduce carbon emissions by lowering energy needed to heat or cooling buildings, or refrigerate package contents. • 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 ⁽¹⁾	ASTM C578	Type	I	VIII	II	IX	XIV	XV
Compressive Resistance	ASTM D1621	at yield or 10% deformation, psi (kPa)	10 (69)	13 (90)	15 (104)	25 (173)	40 (276)	60 (414)
Thermal Resistance (R-value*), 75F ⁽²⁾	ASTM C518	°F·ft ² ·h/BTU (K·m ² /W) 75 ±2°F (23.9 ±1°C)	3.85	3.92	4.17	4.35	4.50	4.60
Thermal Resistance (R-value*), 40F ⁽²⁾	ASTM C518	°F·ft ² ·h/BTU (K·m ² /W) 40 ±2°F (4.4 ±1°C)	4.17	4.25	4.55	4.76	4.85	5.05
Thermal Resistance (R-value*), 25F ⁽²⁾	ASTM C518	°F·ft ² ·h/BTU (K·m ² /W) 25 ±2°F (-3.9 ±1°C)	4.35	4.55	4.76	5.00	5.05	5.10
Flexural Strength	ASTM C203	psi (kPa)	25 (173)	30 (208)	35 (242)	50 (345)	60 (414)	75 (517)
Water Vapor Permeance ⁽³⁾	ASTM E96	For 1" (25.4 mm), perm (ng/PA·s·m ²), 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					

⁽¹⁾ 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.

⁽²⁾ R-value means resistance to heat flow. The higher the R-value, the greater the insulating power. Ask your seller for help with sizing. The R-value properties shown are based on 1 in thickness.

⁽³⁾ 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 specifiers 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.



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Structural Insulated
Panel Association



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Physical Property	Method	Units	Material Property Values				
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Thermal Resistance (R-value*), 40F ⁽²⁾	ASTM C518	°F·ft ² ·h/BTU (K·m ² /W) 40 ±2°F (4.4 ±1°C)	5.2		5.3		
Thermal Resistance (R-value*), 25F ⁽²⁾	ASTM C518	°F·ft ² ·h/BTU (K·m ² /W) 25 ±2°F (-3.9 ±1°C)	5.4		5.5		
Flexural Strength	ASTM C203	psi (kPa)	25 (173)	30 (207)	35 (241)	40 (276)	50 (345)
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Oxygen Index	ASTM D2863	min, volume %	> 24.0				
Surface Burning Characteristics	ASTM E-84 or UL 723	Flame Spread / Smoke Developed	Flame Spread 5, Smoke Developed 25				
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.				
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⁽²⁾ OPCORE-G rigid thermal insulation, and its use and application requirements per building code, are described in ICC-ES ESR 3463 available at www.opcodirect.com/library and from ICC-ES. Thermal resistance (R-value) is based on tested values at 1.06-inch thickness at the temperature indicated. It is recommended to multiply your installed thickness by the R-value indicated and divide the result by 1.06.

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Our Mission is to create value for our customers
while being stewards for the environment.



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