## Insulation



# Kooltherm<sup>®</sup> PREMIUM PERFORMANCE RIGID THERMOSET INSULATION

*Kingspan* **Kool** therm<sup>®</sup> offers an extensive range of premium performance insulation products for wall, floor, soffit (structural ceiling) and concrete sandwich wall system applications. It has a fiber–free rigid thermoset phenolic insulation core that resists both moisture and water vapor ingress, and has excellent fire performance characteristics.

- Highest R-value per inch among any commonly used insulation
- Excellent fire and smoke performance

- Lower total construction cost
- Higher ROI on building design







### K8 Cavity Board

- Partial fill cavity wall insulation
- R–value of 16 on 2 in
- NFPA 285 compliant; for non-combustible cladding; ASTM E 84 rating of 25/20 (flame-smoke)
- Resists sagging and moisture penetration

#### K10 FM Soffit Board

- Insulation for structural ceilings (soffits)
- R-value of 16 on 2 in
- FM approved for exposed use. Class 1 fire rating Class Number 4880
- Increased floor to ceiling clearances

#### K12 Framing Board

- Insulation for wood and steel framing systems
- R–value of 16 on 2 in
- NFPA 285 compliant; for non-combustible cladding; ASTM E 84 rating of 25/20 (flame-smoke)
- Low emissivity foil facings significantly increase thermal resistance of the cavity

#### K20 Concrete Sandwich Board

- High performance insulation for concrete sandwich wall systems
- R-value of 17 on 2 in
- ASTM E 84 rating of 5/5 (flame-smoke)
- Thinner pre-cast and tilt-up panels



# Kooltherm<sup>®</sup>

Property	Test Method	<i>Kingspan</i> <b>Kool</b> therm K8 <sup>⊚</sup> Cavity Board	<i>Kingspan</i> <b>Kool</b> therm K10 <sup>®</sup> Soffit Board	<i>Kingspan</i> <b>Kool</b> therm K12 <sup>®</sup> Framing Board	Kingspan <b>Kool</b> therm K20 <sup>®</sup> Concrete Sandwich Board
		General			
R-value		16 on 2 in	16 on 2 in	16 on 2 in	17 on 2 in
Nominal Thickness (in/mm)		1.575 / 40 1.969 / 50	1.575 / 40 2.362 / 60	1.1811 / 30 1.969 / 50	2.953 / 50 3.937 / 75
Standard Dimensions Width (in/mm) Length (in/mm)		47.25 / 1200 16 / 406.4	47.244 / 1200 89.370 / 2270	47.25 / 1200 96 / 2438	47.244 / 1200 89.370 / 2270
Compressive Strength, Min. (psi@ 10% deflection)	ASTM C 209	21	21	21	21
Water Absorption, Max. (% by volume)	ASTM C 272	1.15	1.0	1.15	1.21
Density, Min. (lb/ft³)	ASTM C 1621	2.0	2.0	2.0	2.0
Closed Cell Content (% of cells closed)	ASTM D 6226	94.67	94.67	94.67	94.67
Air Permeance (L/S/m²) / (cfm/ft²)	ASTM E 2178	0.002 / 0.000	0.001 / 0.000	0.002 / 0.000	0.001 / 0.000
Water Vapor Permeance, Max. <sup>1</sup> (perm)	ASTM E 96	0.51	0.48	0.51	0.79
Fire & Smoke Performance					
Flame Spread <sup>2</sup> Smoke Developed <sup>2</sup>	ASTM E 84 / UL723	25 20	25 20	25 20	5 5

<sup>1</sup> Permeance shown is for 25mm thick board. Permeance typically decreases as board thickness increases.

<sup>2</sup> These numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by this material under actual fire conditions. All applicable building codes must be followed.

#### Compliance

Intertek CCRR 1066;

NFPA 285 Tested Wall Assemblies Using Kingspan Kooltherm TER No. 1601-06;

NFPA 286 Tested Wall Assemblies Using Kingspan Kooltherm TER No. 1601-07;

FM Approval - K10.

For more information on specific building product recommendations and installation guidelines, contact your Kingspan Insulation LLC representative.

For the most current product and compliance information go to www.kingspaninsulation.us.



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