

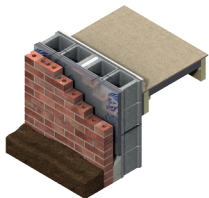


Kooltherm®

PREMIUM PERFORMANCE RIGID THERMOSET INSULATION

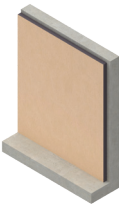
Kingspan Kooltherm® offers an extensive range of premium performance insulation products for wall, floor, soffit (structural ceiling) and concrete sandwich wall system applications. It has a fiber-free rigid thermoset phenolic insulation core that resists both moisture and water vapor ingress, and has 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



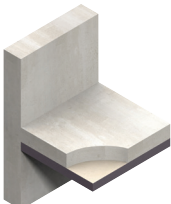
K8 Cavity Board

- Partial fill cavity wall insulation
- R-value of 13.3 on 2 in
- NFPA 285 compliant; for non-combustible cladding; ASTM E84 rating of 25/20 (flame-smoke)
- Resists sagging and moisture penetration



K9 Internal Insulation Board

- Internal insulation for basement, crawl space, attic and habitable space wall applications
- R-value of 14.5 on 2 in
- NFPA 286 compliant; for exposed internal applications; ASTM E84 rating of 5/5 (flame-smoke)
- High R-value allows for increased internal floor space



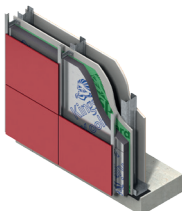
K10 FM Soffit Board

- Insulation for structural ceilings (soffits)
- R-value of 13.7 on 2 in
- FM approved for exposed use. Class 1 fire rating Class Number 4880
- Increased floor to ceiling clearances



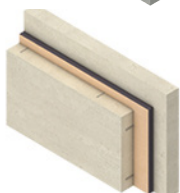
K12 Framing Board

- Insulation for wood and steel framing systems
- R-value of 13.3 on 2 in
- NFPA 285 compliant; for non-combustible cladding; ASTM E84 rating of 25/20 (flame-smoke)
- Low emissivity foil facings significantly increase thermal resistance of the cavity



K15 Rainscreen Board

- Insulation for rainscreen cladding systems
- R-value of 13.3 on 2 in
- UL Classified, NFPA 285 compliant, ASTM E84 rating of 25/20 (flame-smoke)
- Thin profile to maximize interior space leading to higher ROI on investment



K20 Concrete Sandwich Board

- High performance insulation for concrete sandwich wall systems
- R-value of 14.5 on 2 in
- ASTM E84 rating of 5/5 (flame-smoke)
- Thinner pre-cast and tilt-up panels

Product Data

Property	Test Method	Kingspan Kooltherm K8® Cavity Board	Kingspan Kooltherm K9® Internal Insulation Board	Kingspan Kooltherm K10® Soffit Board	Kingspan Kooltherm K12® Framing Board	Kingspan Kooltherm K15® Rainscreen Board	Kingspan Kooltherm K20® Concrete Sandwich Board
General							
R-value		13.3 on 2 in	15.5 on 2 in	13.7 on 2 in	13.3 on 2 in	13.3 on 2 in	14.5 on 2 in
Nominal Thickness (in/mm)		1.58 / 40 1.97 / 50 2.36 / 60	1.57 / 40 1.97 / 50 2.36 / 60 2.95 / 75 3.94 / 100	1.58 / 40 2.36 / 60	1.18 / 30 1.97 / 50 2.95 / 75	1.18 / 30 1.97 / 50 2.95 / 75	1.97 / 50 2.95 / 75 3.94 / 100
Standard Dimensions							
Width (in/mm)		47.25 / 1200	47.244 / 1200	47.244 / 1200	47.25 / 1200	47.25 / 1200	47.244 / 1200
Length (in/mm)		16 / 406.4	89.370 / 2270	89.370 / 2270	96 / 2438	96 / 2438	89.370 / 2270
Compressive Strength, Min. (psi@ 10% deflection)	ASTM D1621	15	17.5	15	15	15	17.5
Water Absorption, Max. (% by volume)	ASTM C209	1.15	1.21	1.0	1.15	1.15	1.21
Density, Min. (lb/ft³)	ASTM C1621	2.0	2.0	2.0	2.0	2.0	2.0
Closed Cell Content (% of cells closed)	ASTM D6226	94.67	94.67	94.67	94.67	94.67	94.67
Air Permeance (L/S/m²) / (cfm/ft²)	ASTM E2178	0.002 / 0.000	0.001 / 0.000	0.001 / 0.000	0.002 / 0.000	0.002 / 0.000	0.001 / 0.000
Water Vapor Permeance, Max. ¹ (perm)	ASTM E96	0.51	0.79	0.48	0.51	0.51	0.79
Fire & Smoke Performance							
Flame Spread ²	ASTM E84 /	25	5	25	25	25	5
Smoke Developed ²	UL723	20	5	20	20	20	5

¹ Permeance shown is for 25mm thick board. Permeance typically decreases as board thickness increases.

² 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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