

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 of commonly available insulations
- Lowest reported smoke developed index rating for foam insulations and minimal flame spread*
- Lower total construction cost
- Higher ROI on building design



K8 Cavity Board

- Partial fill cavity wall insulation
- R-value of 6.8 per inch
- Extensive NFPA 285 compliant wall systems*
- Resists sagging and moisture penetration



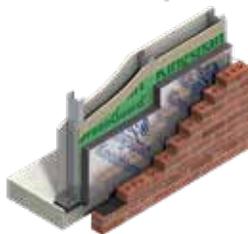
K9 Internal Insulation Board

- Internal insulation for basement, crawl space, attic and habitable space wall applications
- R-value of 7.4 per inch
- NFPA 286 compliant; for exposed internal applications; ASTM E84 rating of 5/5 (flame-smoke)*
- Negligible smoke developed*



K10 Soffit Board

- Low cost solution for insulating structural ceilings (soffits)
- R-value of 7.0 per inch
- FM 4880 approved*
- NFPA 286 approved applications*



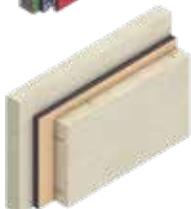
K12 Framing Board

- Insulation for wood and steel framing systems
- R-value of 6.8 per inch
- Extensive NFPA 285 compliant wall systems*
- Low emissivity foil facings may increase thermal resistance of the cavity



K15 Rainscreen Board

- Insulation for rainscreen cladding systems
- R-value of 6.8 per inch
- Extensive NFPA 285 compliant wall systems*
- 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 7.4 per inch
- Extensive NFPA 285 compliant wall systems*
- Thinner pre-cast and tilt-up panels

*See fire performance details on www.kingspaninsulation.us

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 ¹		6.8 per inch	7.4 per inch	7.0 per inch	6.8 per inch	6.8 per inch	7.4 per inch
Nominal Thickness (in/mm)		1.58 / 40	1.57 / 40		1.18 / 30	1.18 / 30	1.97 / 50
		1.97 / 50	1.97 / 50	1.58 / 40	1.57 / 40	1.57 / 40	2.36 / 60
		2.36 / 60	2.36 / 60	2.36 / 60	1.97 / 50	1.97 / 50	2.95 / 75
			3.94 / 100		2.95 / 75	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	16	16	16	16	16	16
Water Absorption, Max. (% by volume)	ASTM C209	1.15	1.21	1.0	1.15	1.15	1.21
Density, Min. (lb/ft ³)	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/m ²) / (cfm/ft ²)	ASTM E2178	0.002 / 0.000	0.002 / 0.000	0.002 / 0.000	0.002 / 0.000	0.002 / 0.000	0.002 / 0.000
Water Vapor Permeance, Max. ² (perm)	ASTM E96	0.51	0.79	0.48	0.51	0.51	0.79
Fire & Smoke Performance							
Flame Spread ³	ASTM E84 /	25	5	25	25	25	5
Smoke Developed ³	UL723	20	5	20	20	20	5

¹Listed R-values per Intertek Code Compliance Research Report CCRR-1066. R-values are expressed in ft²•h•F/Btu.

²Permeance shown is for 25mm thick board. Permeance typically decreases as board thickness increases.

³These 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.

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