

Composites

KEMPLY® ACP laminated panels

PRODUCT CODE: KEM

PRODUCT

Kemply ACP Laminated Wall and Ceiling Panels are manufactured by laminating a fiberglass reinforced panel (FRP) “skin” to an aluminum composite core (ACP) and a variety of other materials.

Due to the fluctuation in substrate material costs, panels are quoted on a custom basis and quotes are valid for 60 days from date quoted unless otherwise negotiated.

PURPOSE

Kemply Laminated Wall and Ceiling Panels are used in a variety of applications where a sturdy laminated wall or ceiling panel is required.

DESIGN PROPERTIES		
SUBSTRATE	SUBSTRATE THICKNESS	AVAILABLE SIZES
Aluminum Composite Core (ACP)	0.12" 3 mm and 0.24" 6 mm	23-3/4" x 23-3/4" 23-3/4" x 48" 603.3mm x 603.3mm 603.3mm x 1219.2mm
ACP 3mm with FSI 0.075" Panel <small>(overall panel thickness of FRP & substrate)</small>	0.19" 4.9 mm	23-3/4" x 23-3/4" 23-3/4" x 48" 603.3mm x 603.3mm 603.3mm x 1219.2mm

TYPICAL PHYSICAL PROPERTIES OF ACP CORE

PROPERTY	ACP 3 mm	ACP 6 mm	TEST METHOD
ALUMINUM THICKNESS DEVIATION	±0.1mm	±0.1mm	DIN 1784
WEIGHT	1.0 lb/ft ²	1.95 lb/ft ²	
TOLERANCE IN LENGTH	-0/+2 mm	-0/+2 mm	DIN 16927/ISO11833-
TOLERANCE IN WIDTH	-0/+1.5 mm	-0/+1.5 mm	DIN 16927/ISO11833-
TOLERANCE IN THICKNESS	±0.15mm	±0.15mm	DIN 16927/ISO11833-
HORIZONTAL FLATNESS	5 mm	4 mm	DIN ISO 1101
LONGITUDINAL ROUGHNESS	5 mm	5 mm	DIN ISO 1101
TECHNICAL PROPERTIES	ACP 3 mm	ACP 6 mm	TEST METHOD
SECTION MODULUS W	1.25 cm ³ /m	2.75 cm ³ /m	DIN 53293
RIGIDITY (POISSON'S RATIO $\mu = 0.3$) E.J.	0.14 kNcm ² /m	0.63 kNcm ² /m	DIN 53293
ALLOY	1100 ENAW	1100 ENAW	EN 573-3
TEMPER OF COVER SHEETS	H16/H18	H16/H18	EN 515
MODULUS OF ELASTICITY	70000 N/mm ²	70000 N/mm ²	EN 199 1-1
TENSILE OF STRENGTH OF ALUMINUM	Rm ≥ 145 N/mm ²	Rm ≥ 145 N/mm ²	EN 485-2
0.2% PROOF STRESS	Rp0.2 ≥ 100 N/mm ²	Rp0.2 ≥ 100 N/mm ²	EN 485-2
ELONGATION	A50 ≥ 2%	A50 ≥ 2%	EN 485-2
LINEAR THERMAL EXPANSION	2.4 mm/m°C at 100°C temp difference	2.4 mm/m°C at 100°C temp difference	EN 1999 1-1
CORE	ACP 3 mm	ACP 6 mm	TEST METHOD
POLYETHYLENE, TYPE LDPE	0.935 g/cm ³	0.935 g/cm ³	
SURFACE	Coil Coating	Coil Coating	
LACQUERING	Fluorocarbon based (PE)	Fluorocarbon based (PE)	
THICKNESS OF COATING	≥16 μ m	≥16 μ m	
GLOSS (INITIAL VALUE)	20% - 100%	20% - 100%	ECCA T2
PENCIL HARDNESS	2H	2H	ECCA T4

ACOUSTICAL PROPERTIES	ACP 3 mm	ACP 6 mm	TEST METHOD
SOUND ABSORPTION FACTOR α_s	0.05	0.05	ISO 354
SOUND TRANSMISSION LOSS R_w	25 DB	28 DB	ISO 717-1
LOSS FACTOR d	0.007	0.014	EN ISO 6721
THERMAL PROPERTIES	ACP 3 mm	ACP 6 mm	TEST METHOD
THERMAL RESISTANCE R	0.0069m ² K/W	0.0172m ² K/W	DIN 52612
HEAT TRANSITION COEFFICIENT U	5.65 W/m ² K	5.34 W/m ² K	DIN 4108
TEMPERATURE RANGE	-50°C... +80°C	-50°C... +80°C	

FINISHED PANEL QUALITY

See Kemply technical data sheet (form #65025) for detailed information.

FIRE RATINGS AND PHYSICAL PROPERTIES

Due to the wide variation in skin-substrate combinations, the composite panels quoted have not been tested for physical properties or fire ratings per ASTM E-84, except for the laminated panels detailed below. All of the FRP panel "skins" have been tested for surface burning characteristics per ASTM E-84 and each product has a published technical data sheet which can be found at www.cranecomposites.com. Physical properties and fire rating information on the substrate may be available from the specific substrate manufacturer and available upon request. Crane Composites makes no representation or warranty as to the composite laminate panel's fitness for any specific application, overall physical properties, fire resistance or burning characteristics.

The following composite laminated panels have been tested to ASTM E-84:

- .075" Smooth Glasbord Class A (FSI) to .12" (3mm) Aluminum Composite Core (ACP) single-sided skin
- .075" Smooth Glasbord Class A (FSI) to .12" (3mm) Aluminum Composite (ACP) double-sided skins

CERTIFICATIONS

1. Meets minimum requirements of major model building codes for Class A interior wall and ceiling finishes of flame spread ≤ 25 , smoke developed ≤ 450 (per ASTM E-84).
2. This panel has earned GREENGUARD® Indoor Air Quality Certification (Certificate #15955-410) greenguard.org.



FABRICATING AND INSTALLATION

See Kemply technical data sheet (form #65025) for detailed information.

Prior to working with our products, see our most current SDS at cranecomposites.com/sds.html

STORAGE REQUIREMENTS

All laminated panels should be stored in a dry place indoors. Exposure to humid or wet conditions prior to installation can cause panel warping. Efforts to limit this exposure during storage can reduce this warp-age. Standing water on the surface laminate during storage can cause discoloration.

CUTTING REQUIREMENTS

Use triple chin thin curve carbide blade - with extra teeth.

SERVICEABLE TEMPERATURE RANGE

Panels will perform in temperatures from -40°F (-40°C) to 130°F (55°C). For use in environments beyond this range contact Crane Composites for recommendations.

LIMITATIONS

Near Heat Source: Crane Composites panels will discolor when installed behind or near any heat source which radiates temperatures exceeding 130°F (55°C), such as cookers, ovens, and deep fryers. Do not install near a hear source. In Areas of Extreme Temperature Fluctuation: (over 20°F/7°C), laminated panels with polypropylene substrate must be laminated on both sides to avoid warping and installed with mechanical fasteners.

Smooth Finish Panels: Panels with a smooth FRP face are shipped with a protective film to help avoid scratching. Remove the film prior to installation.
Lay-in Ceiling Panels: Lay-in ceiling panels with gypsum, plywood, oriented strand board or polypropylene substrates should be laminated with double-sided skins to avoid warping due to temperature or humidity changes.

NOTICE

Panels will provide a clean, aesthetically-pleasing finished installation. However, by nature, fiberglass reinforced plastic paneling may occasionally have small areas that are aesthetically unacceptable for use. Panels should be inspected on-site prior to installation. If any portion of material does not provide an acceptable appearance, Crane Composites should be notified at once. Upon verification of unacceptability, that portion of material will be replaced by Crane Composites. Crane Composites' sole responsibility is for the replacement of defective materials but not for labor or other handling or installation expenses.

FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS

The numerical flame spread and smoke development ratings are not intended to reflect alleged hazards presented by Crane Composites products under actual fire conditions and this product has not been tested by Crane Composites except as set forth below. These ratings are determined by small-scale tests conducted by Underwriters Laboratories and other independent testing facilities using the American Society for Testing and Materials E-84 test standard (commonly referred to as the "Tunnel Test"). CRANE COMPOSITES PROVIDES THESE RATINGS FOR MATERIAL COMPARISON PURPOSES ONLY. Like other organic building materials (e.g. wood), panels made of fiberglass reinforced plastic resins will burn. When ignited, FRP may produce dense smoke very rapidly. All smoke is toxic. Fire safety requires proper design of facilities and fire suppression systems, as well as precautions during construction and occupancy. Local codes, insurance requirements and any special needs of the product user will determine the correct fire-rated interior finish and fire suppression system necessary for a specific installation. We believe all information given is accurate, without guarantee. Since conditions of use are beyond our control, all risks are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending a license under valid patents. www.astm.org/Standards/E84.htm.

A global leading provider of resilient wall and ceiling coverings. Kemlite® was established in 1954 and the company changed names to Crane Composites in 2007. Crane Composites is headquartered in Channahon, IL and all our products are manufactured in the United States. We work with hundreds of distributors, ensuring our products are easily accessible and readily available to our customers.

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