

K-FLEX CLAD® AL

Multi-Layer Laminate Protective Jacketing
Fully-Adhered to Elastomeric Insulation



DESCRIPTION

K-FLEX CLAD® AL, available in tube or sheet form, is a composite product comprised of closed-cell elastomeric insulation (black or K-FLEX ECO™) adhered to a multi-layer laminate of a PVC core, aluminum foil, and a special UV-protection film.

K-FLEX CLAD® AL is fiber-free, non-porous, CFC- and HCFC-free. K-FLEX CLAD® AL is GREENGUARD® certified as a low VOC material, meeting the criteria for the “Children and Schools” and “Indoor Air Quality” classifications. These characteristics allow it to comply with *Health, Safety and Environmental requirements*.

K-FLEX CLAD® AL tubes are available in all standard IDs in 1/2”, 1” and 1-1/2” wall thicknesses in nominal 3’ lengths. Sheet product is available with or without an aggressive pressure sensitive adhesive (PSA) with fiberglass scrim reinforcement and a moisture/tear resistance polyolefin easy release liner in 36” x 48” dimensions or 48” wide rolls up to 2” thick (1-1/2” with PSA).

The PVC / aluminum cladding provides a secondary moisture vapor barrier to the inherently moisture-resistant closed-cell foam core. K-FLEX CLAD® AL jacketing has a permeance of .001 perms when tested according to ASTM E 96.

APPLICATIONS

K-FLEX CLAD® AL is an ideal choice for outdoor applications (roof top), food processing plants, pharmaceutical facilities, film processing, electronics and other clean room applications subject to code compliance. K-Fit® factory-fabricated fittings, K-FLEX CLAD® AL Segmented Fitting Covers and K-FLEX CLAD® AL Tape for sealing butt joints and covering edges complete the installation.

The cladding provides weather and abuse resistance, as well as protection from UV rays. The smooth shiny surface is easy to clean, dust-free, resistant to acids, alkali, salts, oil, fats, and aliphatic hydrocarbons, and is highly impermeable to gases and moisture. Unlike traditional metal jackets, CLAD® AL does not dent, has a high emissivity value (0.80), has excellent appearance and is easy to maintain. The K-FLEX CLAD® AL system allows for quick and easy replacement if necessary.

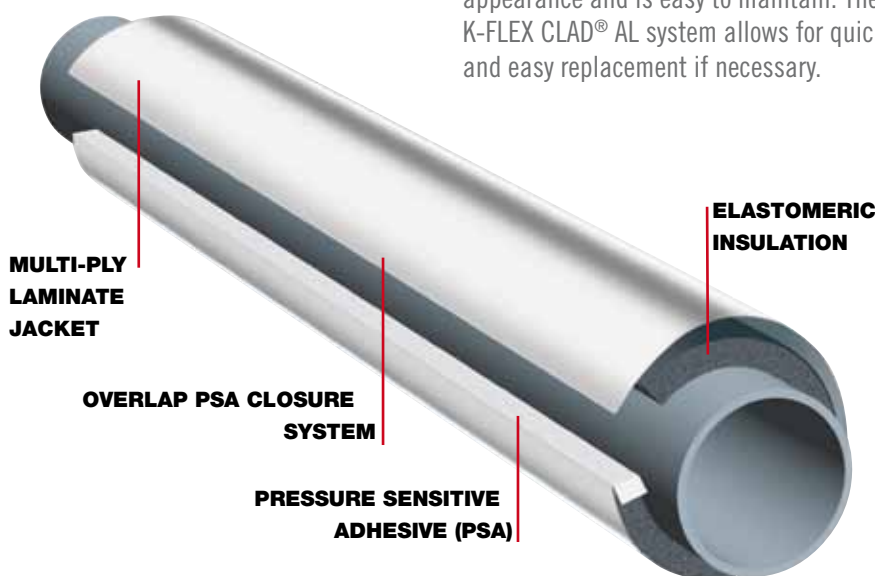
The temperature range for K-FLEX CLAD® AL tubes or sheets is dependent on the insulation it is adhered to. Reference the chart on page 2 for temperature range information. K-FLEX CLAD® AL - ECO should be requested as the foam core on stainless steel applications above 100°F.

INSTALLATION

Factory-applied tubes have a unique overlap closure system, which eliminates through seams on longitudinal seams and ensures against moisture penetration. Light and easy to handle, the K-FLEX CLAD® AL system provides installed cost savings over traditional metal jacket or mastic systems with improved performance. K-FLEX® Rivets are included with the tube product and should be applied along the longitudinal seam during installation.

K-FLEX CLAD® AL can be painted for aesthetic purposes using a paint suitable for painting furniture, such as rustoleum plastic spray paint.

Factory-applied K-FLEX CLAD® AL Sheets should only be installed on flat surfaces. For large diameter round applications (duct or pipe), CLAD® AL rolls should be field-applied to the insulation as described in the *K-FLEX USA Installation Manual*.



SPECIFICATION COMPLIANCE

- ASTM C 534 Type 1 (Tubing), Grade 1
- USDA Compliant
- RoHS Compliant
- ASTM E84 25/450-tested according to UL 723 and NFPA 255 Complies with requirements of CAN/ULC S102-M88



MULTI-LAYER LAMINATE MATERIAL

ATTRIBUTES	K-FLEX CLAD® AL	TEST METHODS
Thickness	0.012"	
Reaction to Fire	25/450	ASTM E 84
Water Vapor Permeance	0.001 perms*	ASTM E 96
Weather, UV Resistance	Excellent	ASTM G 53
Corrosion Risk	Provides protection for corrosion under insulation	
Salt Spray Resistance	Excellent	BS 903 F12
Wear Resistance	Excellent	BS 903 A2
Ozone Resistance	Excellent	BS 903 A43, ASTM D1171
Chemical Resistance	Excellent	Acids, Alcohols, Alkalies, Oils
Puncture Ø 3.0 mm	100 N	prEN 14 477
Emissivity	0.80	ASTM C 1371
Tensile Strength	90 lbs per ft	ASTM D 828
Burst Strength	203 psi	ASTM D 774
Dimensional Stability (length change)	-1%	ASTM D 1204
Color	Silver	

ELASTOMERIC CORE MATERIAL

	STANDARD	K-FLEX ECO™	
Temperature Range	-297°F TO +220°F -70°F TO +200°F with PSA	-297°F TO +300°F -70°F TO +200°F with PSA	ASTM C 411
Color	Black	Green	
Thermal Conductivity (75°F Mean temp)	0.245 BTU-in/hr-ft²-°F	0.270 BTU-in/hr-ft²-°F	ASTM C 177, ASTM C 518
Water Vapor Permeability	0.03 perm-in	0.03 perm-in	ASTM E 96
Water Absorption % (Volume Change)	0	--	ASTM C 209
Resistance to oil & greases	Good	Good	
Density (lbs pcf)	3 to 6	4.5	ASTM D 1622, ASTM D 3575
Resistance to U.V. & weather	Good	Good	
Ozone Resistance	Good	Good	ASTM D1171
Dimensional Stability	<4.0 @ 220°F	--	ASTM C 534
Flame Spread / Smoke developed	<25/50 --	<25/50 (up to 3/4") US Navy BBN (25 lbs steam)	ASTM E 84 EB 4013
Optical Smoke Density	--	<150	ASTM E 662

COMPOSITE SYSTEM

Water Vapor Permeability	0.001 perm-in	ASTM E 96
*Water Vapor Permeance at PSA Overlap Seam	0.004 perms	