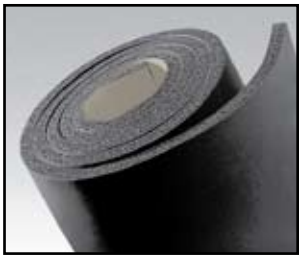
FOR PRICING AND AVAILABILITY CONTACT ALLSTATE INSULATION AT
888-881-4822 516-932-9171 (FAX)

K-FLEX™ LS SHEET with PSA

Protected by the Bio-Guard™ System

Flexible closed cell elastomeric pipe insulation
Designed for the professional contractor



DESCRIPTION

K-FLEX™ LS Sheet with Self Seal Pressure Sensitive Adhesive (PSA) Insulation is an environmentally friendly, CFC-free, flexible elastomeric thermal insulation. It is black in color, and supplied as flat sheets (36" x 48") in standard thicknesses of 1/8" thru 1-1/2". It is supplied skin one side with a specially formulated scrim reinforced acrylic adhesive and tear resistant release liner on the opposite side.

K-FLEX™ LS Sheet with PSA is also available in rolls, with a standard roll width of 48". K-FLEX™ LS Sheet with PSA.

K-FLEX™ LS Sheet with PSA is non-porous, non-fibrous and resists mold growth. K-FLEX™ LS closed cell structure inherently resists mold growth. The Bio-Guard™ antimicrobial system provides added protection against mold, fungal and bacterial growth. The active ingredient in Bio-Guard™ is registered with the EPA.

K-Flex USA elastomeric insulation products are GREENGUARD **certified** as low VOC materials, meeting the requirements of the "Children and Schools" classification, the most stringent requirements. Additionally, all K-Flex USA elastomeric insulation products are GREENGUARD **listed** for mold resistance and meet the "mold resistant" criteria.

Features of PSA: tear and moisture resistant easy release liner, reinforced scrim prevents stretching insulation & scrim reinforcement improves peel strength.

APPLICATIONS

K-FLEX™ LS Sheet with PSA is used to retard heat gain and prevent condensation or frost formation on cold equipment or ducts. It also effectively retards heat loss when used on hot or cold equipment or ducts. K-FLEX™ LS Sheet with PSA is recommended for applications ranging from -70°F to 200°F (-57°C to 93°C). K-FLEX™ LS Sheet with PSA speeds up installation time and reduces the amount of solvent based contact adhesives required thus making it ideal for retrofit and OEM applications. The scrim reinforcement reduces the tendency to stretch the sheet insulation during installation as well as improving the peel strength of the material. K-FLEX™ LS Sheet with PSA can be used as a duct covering.

K-FLEX™ LS Sheet with PSA thickness has been calculated to control condensation on cold surfaces. Refer to the table on the reverse side for specific recommendations.

INSTALLATION

K-FLEX™ LS Sheet with PSA Insulation is applied to clean, dry surfaces by simply peeling the release liner away and applying uniform pressure to the sheet. Compression joints with adhesive applied should be used on all butt edges. See Technical Bulletin for installation instructions in cold temperatures.

K-FLEX™ LS Sheet with PSA is acceptable for use in plenum applications, meeting the requirements of NFPA 90A/B.

K-FLEX™ LS Sheet with PSA is also available with factory-applied claddings for outdoor and indoor applications. Contact K-Flex USA for specific installation instructions.

OUTDOOR APPLICATIONS

For optimum performance, outdoor applications require 374 Protective Coating or other recommended protective coating, cladding or jacketing. For more detailed information refer to the Application Guide.

RESISTANCE TO MOISTURE VAPOR FLOW

The closed-cell structure and unique formulation of K-FLEX™ LS Sheet with PSA effectively retards the flow of moisture vapor, and is considered a low transmittance vapor retarder. For most indoor applications, K-FLEX™ LS Sheet with PSA needs no additional protection.

Additional vapor barrier protection may be necessary for K-FLEX™ LS Sheet with PSA when installed on low temperature surfaces that are exposed to continuous high humidity.

SPECIFICATION COMPLIANCE

ASTM C 534 Type 2 (Sheet), Grade 1
ASTM D 1056-00-2C1
New York City MEA 186-86-M Vol. IV
USDA Requirements
STC = 17 per ASTM E 90
CAN/ULC S102-03

Flammability:
UL 94-5V Flammability Classification (Recognition No. E300774)
ASTM E 84 Foam Core: 25/50 at 1-1/2" and below; PSA: 0/10

Meets requirements of UL 181 Sections 11.0 and 16.0 (Mold Growth/Air Erosion)

Meets requirements of ASTM C 411 (Test Method for Hot Surface Performance of High Temperature Thermal Insulation)

Made in USA

K-FLEX™ LS SHEET with PSA

PRODUCT DATA

Foam Core Closed Cell Insulation

Physical Properties

Temperature Range Sheets	-70˚F to + 200˚F		ASTM C 411
Color	Black		
Thermal Conductivity	75˚F	0.25 BTU-in/hr-ft^2-˚F	ASTM C 177/C 518
Water vapor permeability	<0.06 perm-in		ASTM E 96
Flexibility	Excellent		
Water absorption %	<0.20 by volume		ASTM C 209
Ozone resistance	Good		

Resistance to oil & greases	Good	
Density	3 pcf to 6 pcf	ASTM D 1622 ASTM D 3575
Resistance to U.V. & weather	Good[1]	
Odor	Negligible	
% closed cells	>90	

1 Outdoor applications should be protected with an approved K-FLEX™ coating/cladding.

Sound Absorption Co-efficients at Frequency

ASTM C-423/E-795 Type A Mounting/Sabins/Sq. Ft.

Thickness	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
1/4"	0.00	0.03	0.05	0.10	0.25	0.45	0.10
1/2" (12mm)	0.03	0.04	0.08	0.15	0.40	0.25	0.20
1" (25mm)	0.10	0.15	0.45	0.30	0.40	0.33	0.35

Thickness Recommendations* - To Control Condensation

Sheet Size	Ducts - Tanks - Vessels - Equipment - Metal - Surface Temperature							
	50°F	10°C	35°F	2°C	0˚F	-18˚C	-20˚ F	-29˚C
Normal Conditions (Max 85°F, 29°C - 70% R.H.)	1/2"	13 mm	3/4"	19 mm	1"	25 mm	1-1/2"	38 mm
Mild Conditions (Max 80˚F, 26˚C - 50% R.H.)	1/8"	3 mm	1/4"	6 mm	1/2"	13 mm	3/4"	19 mm
Severe Conditions (Max 90˚F, 32˚C -80% RH)	3/4"	19 mm	1"	25 mm	1-3/4"	44 mm**	2"	51 mm

***K-FLEX™ LS SHEET with PSA** in thickness noted within the specified temperature ranges will prevent condensation on indoor piping under design conditions defined below. Thickness recommendations above 1-1/2" can be layered to achieve thickness. Subject to compliance with applicable code requirements.*
***Normal:** Maximum severity of indoor conditions seldom exceed 85°F (29°C) and 70% R.H. in United States.*
***Mild:** Typical conditions are most air-conditioned spaces and arid climates.*
***Severe:** Generally found in areas where excessive moisture is introduced or in poorly ventilated areas where the temperature may be depressed below the ambient. Under conditions of high humidity, additional thickness of insulation may be required.*
NOTE: Thickness recommendations calculated using 0.2575 K-factor (0.25 plus 3% test error allowance)

Sheet "R" Values (based on nominal thickness)

R Value 3/8"*	R Value 1/2"*	R Value 3/4"*	R Value 1"*	1 1/2"*
1.5	2	3	4	6

All sizes are nominal.

Note: "R" factors were calculated using a K factor of 0.2575 (0.25 plus 3% test error allowance at 75°F, 24°C mean temp.) and nominal thickness is each case. Lower operating temperatures will result in improved R values. Contact Technical Services for specific recommendations.

Pressure Sensitive Adhesive Properties (PSA)

Description: Transfer tape designed for high temperatures (250˚F), high performance applications where high tack, comformability, plasticizer resistance and a thin bond layer are required.

Construction: Adhesive: High coat weight modified crosslinked acrylic typified by a high initial tack, plasticizer resistance and high shear strength, resistant to solvents, chemicals, UV light and moisture.

Scrim: Support (6 g/m^2).

Liner: PE release liner, (75 microns) moisutre and tear resistant, easy release.

K-Flex USA - 100 Nomaco Drive - Youngsville, NC 27596 - toll free 800-765-6475 - fax 800-765-6471 - www.kflexusa.com

K-FLEX USA

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