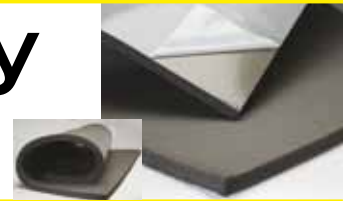


K-Flex Duct® Liner Gray

Flexible closed-cell insulation supplied with or without PSA*
Designed for lining in air handling systems



SHEETS AND ROLLS

DESCRIPTION

K-Flex Duct® Liner Gray is a CFC- and HCFC-free, closed-cell, flexible elastomeric thermal and acoustical insulation. It is gray in color and supplied in rolls up to 60" wide from 1/2" to 2" thickness**. It is supplied with S2S (Skin 2 Sides) or with a specially formulated scrim-reinforced acrylic adhesive and tear-resistant release liner on the opposite side.*

K-Flex Duct® Liner Gray is non-porous, fiber-free and resists mold growth. An EPA-registered antimicrobial agent is incorporated into the product providing additional protection against mold, fungal and bacterial growth.

K-Flex Duct® Liner Gray is GREENGUARD® certified and meets the requirements for Indoor Air Quality, Children and Schools and Microbial Resistance designations. This ensures our products have been independently tested and verified to meet strict emission levels of VOCs and have shown the ability to resist the growth of mold when subjected to adverse environmental conditions.

Features of PSA*: tear- and moisture-resistant polyolefin easy release liner; continuous reinforcing scrim that prevents stretching of insulation and improves peel strength.

APPLICATIONS

K-Flex Duct® Liner Gray is used to retard heat gain / loss and prevent condensation or frost formation on equipment or ducts. K-Flex Duct® Liner Gray is recommended for applications ranging from -40°F to 200°F (-40°C to 93°C).

K-Flex Duct® Liner Gray can be used as both duct and air handling equipment liner and is R-8 at 2" thickness. R-values designate the thermal resistance value of a material. R-8 equals 8 resistance units and is currently required in more than 30 state building codes.

K-Flex Duct® Liner Gray with PSA* reduces installation time and minimizes the amount of solvent-based contact adhesives required, making it ideal for new and retrofit applications. The scrim reinforcement reduces the tendency to stretch the sheet insulation during installation and improves the peel strength of the material.

Thickness recommendations for K-Flex Duct® Liner Gray have been calculated to control condensation on cold surfaces. Refer to the table on the last page for specific recommendations.

* PSA available up to 1-1/2" thickness.

**All thicknesses are nominal.

Ideal Applications include air handling systems in schools, hospitals, hotels, public buildings and clean/processing rooms.

INSTALLATION

K-Flex Duct® Liner Gray Insulation should be applied to clean, dry ductwork and equipment. Adhesive should be applied to all compression joints and used on all butt edges. Apply mechanical fasteners in accordance with SMACNA guidelines.

When air stream velocities exceed 4,000 FPM (20.3m/sec-ond), metal nosing is recommended to be applied to every leading edge. Nosing may be formed, channeled or zee-attached on duct by screws, rivets or welds. K-Flex Duct® Liner Gray is acceptable for use in duct or plenum applications, meeting the requirements of NFPA 90A and 90B.

RESISTANCE TO MOISTURE VAPOR FLOW

The closed-cell structure and unique formulation of K-Flex Duct® Liner Gray effectively retards the flow of moisture vapor, and is considered a low transmittance vapor retarder. For most applications, K-Flex Duct® Liner Gray needs no additional protection.

SPECIFICATION COMPLIANCE

ASTM C534 Type 2 (Sheet), Grade 1
ASTM D1056-00-2C1
ASTM C423/E795 NRC=0.50 at 1" thickness
New York City MEA 186-86-M Vol. V

Flammability:
UL 94-5V Flammability Classification (Recognition No. E300774)
ASTM E84: 25/50 at 2" and below

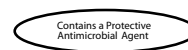
Meets requirements of NFPA 90A Sect. 2.3.3 for Supplementary Materials for Air Distribution Systems up to 2" thickness

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

Meets requirements of ASTM C411 (Test Method for Hot Surface Performance of High Temperature Thermal Insulation)



Made in USA



K-Flex Duct® Liner Gray

PRODUCT DATA

Foam Core Closed-Cell Insulation

Physical Properties

Temperature Range Sheets	-40°F to + 200°F	ASTM C 411	Density	3 pcf to 6 pcf	ASTM D 1622
Color	Gray				ASTM D 3575
Thermal Conductivity (75°F mean)	0.25 BTU-in/hr-ft ² -°F	ASTM C 177	Resistance to U.V. & weather	Good ¹	
Water vapor permeability	<0.06 perm-in	ASTM E 96	Odor	Negligible	
Flexibility	Excellent		% closed cells	>90	
Water absorption %	<0.20	ASTM C 209	Mold resistance	Pass	ASTM C 1338
Ozone resistance	Good				UL 181 / ASTM G 21
Resistance to oil & greases	Good		Air Erosion	Pass 10,000 fpm	UL 181

¹ Where UV sterilizing equipment is used within the air handling system, protect K-Flex Duct® Liner Gray with K-Flex® 374 Protective Coating. Refer to 374 technical data sheet for more information.

Note: One glued seam per roll; mfg option.
1/2" supplied Skin-Two-Side or Skin-One-Side; mfg option.

Sound Absorption Coefficients at Frequency

ASTM C423 / E795 Type A Mounting/Sabins/Sq. Ft. Thickness	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
1/2" (12mm)	0.01	0.03	0.06	0.13	0.33	0.23	0.15
3/4" (19mm)	0.13	0.13	0.80	0.41	0.58	0.57	0.50
1" (25mm)	0.12	0.25	0.97	0.32	0.52	0.48	0.50

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
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
Normal Conditions (Max 85°F, 29°C - 70% R.H.)	1/2"	13 mm	3/4"	19 mm	1"	25 mm	1-1/4"	32 mm
Severe Conditions (Max 90°F, 32°C -80% R.H.)	3/4"	19 mm	1"	25 mm	1-3/4"	44 mm	2"	51 mm

*K-Flex Duct® Liner Gray in thickness noted within the specified temperature ranges will prevent condensation under design conditions defined below. K-Flex Duct® Liner Gray is not available in all thicknesses listed.

Mild: Typical conditions are most air-conditioned spaces and arid climates.

Normal: Maximum severity of indoor conditions seldom exceed 85°F (29°C) and 70% R.H. in United States.

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

R Value 1/2"	R Value 3/4"	R Value 1"	R Value 1-1/2"	R Value 2"
2.0	3.0	4.2	6.0	8.0

R-8
sheet

All sizes are nominal.

Note: "R" values 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 in 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, conformability, 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.
Liner: PE release liner, (75 microns) moisture and tear resistant, easy release.



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