SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Manufacturer's name and address:

K-FLEX USA

K-FLEX USA
100 Nomaco Dr
Youngsville, NC 27596
USA

Supplier's name and address:

Refer to Manufacturer

Telephone No.	:	(800) 765-6475
Website Address	:	www.kflexusa.com
Product Identifier	:	K-FLEX Elastomeric Foam; K-FLEX INSUL-TUBE, K-FLEX INSUL-SHEET, K-FLEX INSUL-LOCK, K-FLEX INSUL-LOCK SEAM SEAL K-FLEX ECO, K-FLEX DUCT LINER GRAY, K-FIT, K-TEK K 41-E, ELASTOMERIC TAPE
Chemical Name	:	NBR/PVC Elastomeric Foam
Recommended Use	:	This product is classified as an "article" according to Title 29 of the Code of Federal Regulations, OSHA Part 1910.1200C.

SECTION 2 – HAZARD(S) IDENTIFICATION

Hazardous Ingredient : None

SECTION 3 – COMPOSITION/INFORMATION OF INGREDIENTS

Description : Elastomeric closed-cell foam comprised of nitrile butadiene rubber/polyvinyl chloride (NBR/PVC). Available in rolls and sheets of various dimensions.

SECTION 4 – FIRST-AID MEASURES

Inhalation	:	Unlikely route of exposure. No measures established.
Skin Contact	:	If rash or irritation develops, wash with soap and water. If rash or irritation persists, consult a physician.
Eye Contact	:	Small particles may cause irritation. Flush with water. If irritation persists, consult a physician.
Ingestion	:	Unlikely route of exposure. No adverse effects anticipated.

SECTION 5 – FIRE-FIGHTING MEASURES

Extinguishing Media	:	Water, CO_2, Dry Chemical, Foam
Special Firefighting Procedures	:	Recommend NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing be worn.
Decomposition Products	:	Upon combustion, HCl, HCN, and other hazardous gases may be evolved.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	Recommend light to medium duty cloth or leather gloves and approved safety glasses.
Emergency Procedures	:	None.

SECTION 7 – HANDLING AND STORAGE

Hints for Safe Handling	:	None.
Hints for Fire and Explosion Protection	:	None.
Hints for Separation of Incompatible Materials	:	None.
Storage Recommendations	:	Avoid storage in confined areas where temperatures may exceed 51°C (125°F).

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Medical Conditions Aggravated by Exposure	:	Not established.
Codes Used	:	N/A
General Health Measures	:	N/A
Engineering Controls	:	Local exhaust ventilation is recommended for control of airborne dust, fumes, and vapors in confined areas.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Sheets, rolls, and tubes; some with self-adhesive
Color	:	Black, white, or gray.
Odor	:	Negligible to no odor.
Melting Point	:	N/A
Boiling Point	:	N/A
Lower Explosion Limit	:	N/A
Upper Explosion Limit	:	N/A
Vapor Pressure @ 20°C	:	0.1

Vapor Density (Air = 1)	: N/A
Solubility	: Insoluble
Specific Gravity (H_2O = 1)	: N/A
Flash Point	: N/A

SECTION 10 – STABILITY AND REACTIVITY

Stability	: Stable.
Incompatibility	: N/A
Decomposition Products	: Upon combustion, HCI, HCN, and other hazardous gases may be evolved.

SECTION 11 – TOXICOLOGICAL INFORMATION

Effects on short- and long-term Exposure : When used and handled according to specification, the product does not have any harmful effect to the best of our knowledge.

SECTION 12 – ECOLOGICAL INFORMATION

Classified as non-hazardous to waters.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal : Not a RCRA hazardous waste. Dispose of in accordance with local, state, and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

No hazardous materials.

SECTION 15 – REGULATORY INFORMATION

N/A

SECTION 16 – OTHER INFORMATION

Revised January, 2015. The information and recommendations contained herein are based upon data that is accurate and reliable, to the best of K-FLEX USA, LLC knowledge and belief. With respect to information and recommendations, K-FLEX USA, LLC makes no representations or warranties of any kind or nature, expressed or implied.

S A F E T Y D A T A S H E E T

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Water Based Liner Adhesive
MANUFACTURERS'	Elgen Manufacturing Company INC.
ADDRESS:	10 Railroad Ave, Closter NJ 07624
EMERGENCY PHONE:	INFOTRAC: (800) 535-5053
BUSINESS HOURS:	6AM - 6PM
REVISION DATE:	04/01/2016
INFORMATION PHONE:	(800)503-9805
REVISION #:	3-15
PREPARED BY:	IT Department. Supersedes all previous
DOT HAZARD CLASS:	Not Hazardous - UN Number: N/A

SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION

HMIS Ratings: Health: 1 Flammability: 0 Reactivity: 0 Personal Protective Equipment: B

REPORTABLE COMPONENTS	CAS NUMBER	Weight %
None		

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

PROPRIETARY COMPONENT	CAS NUMBER	CONCENTRATION
Trade Secret	Proprietary Blend	

SECTION IV – FIRST AID MEASURES

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Contact physician or emergency medical facility immediately.

SKIN: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Do not rub affected area. If irritation persists, get medical attention. Skin reaction may take 24 to 48 hours to develop. Wash contaminated clothing before reuse.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Contact physician or emergency medical facility immediately. Never give anything by mouth to an unconscious person.

SECTION V - FIRE-FIGHTING MEASURES

FLASH POINT	None
FIRE AND EXPLOSION HAZARD	Closed containers exposed to extreme heat may rupture due to pressure build up
EXTINGUISHING MEDIA	The product will only burn after the water it contains is driven off. For dried film use water, foam, carbon dioxide or dry chemical.
FIRE FIGHTING INSTRUCTIONS	Water may be used to cool exposed containers.

SECTION VI – ACCIDENTAL RELEASE MEASURES

SPILL CLEANUP: Dike, contain, or absorb with inert absorbent material. Collect spilled material in a salvage container. Prevent spill from entering sewers, drains, streams, waterways, or other bodies of water.

ACCIDENTAL RELEASE MEASURES: Dispose of in accordance with all local, state and federal regulations.

SECTION VII – HANDLING AND STORAGE

HANDLING: DO NOT ALLOW TO FREEZE. Store in a cool dry location away from heat. Keep containers tightly closed and store with adequate ventilation.

OTHER PRECAUTIONS: DO NOT TAKE INTERNALLY. Avoid inhalation of excess vapors, ingestion, and unnecessary, prolonged, or repeated contact with this and any other chemical. Change soiled work clothes frequently. Clean hands after handling. KEEP OUT OF REACH OF CHILDREN.

STORAGE: Keep in a dry, cool place, protect material from freezing.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS : Use only in area provided with appropriate exhaust ventilation.

EYE PROTECTION : Use chemical splash goggles or OSHA permitted safety glasses.

SKIN PROTECTION : Protection gloves

RESPIRATORY PROTECTION : Not required under normal conditions. Provide sufficient ventilation to maintain constant fresh air in workspace. If TLV is exceeded, use NIOSH/MSHA approved organic vapor and mist, supplied air, or self-contained breathing apparatus. Avoid breathing sanding dust.

SECTION IX - PHYSICAL / CHEMICAL PROPERTIES

FORM	Mobile Liquid	**SPECIFIC GRAVITY**	(H_20=1) 1.1-1.2
COLOR	White or Black	**BOILING POINT**	212°F
ODOR	Mild, Sweet	**PH**	8.0-9.5
SOLUBILITY IN WATER	Miscible	**PERCENT VOLATILE BY WEIGHT**	55-65%
COATING V.O.C.	22 g/l	**VISCOSITY (CPS)**	approx. 2,000-3,500
WATER SOLUBILITY	Soluble	**FREEZING POINT**	32°F(0°C)

SECTION X – STABILITY AND REACTIVITY DATA

CONDITIONS TO AVOID : Coagulation may occur after freezing, thawing, or boiling.

INCOMPATIBILITY : Metal salts, mineral acids (i.e. sulfuric, phosphoric, etc.) Strong oxidizing agents. Strong reducing agents.

DECOMPOSITION : May form toxic materials on thermal decomposition including Carbon monoxide (CO), Carbon dioxide (CO2), and various hydrocarbons. Under fire conditions, this product will release hydrogen chloride gas.

POLYMERIZATION : Polymerization will not occur.

STABILITY : Stable at ambient temperatures.

SECTION XI – TOXICOLOGICAL INFORMATION

SKIN : Prolonged and repeated contact with product may cause skin irritation.

EYES : Direct contact, may cause irritation.

INHALATION : Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, and respiratory tract and symptoms of headache and nausea.

SECTION XII – ECOLOGICAL INFORMATION

ECOTOXICITY: No ecotoxicity data was found for the product

ENVIRONMENTAL FATE: No environmental information found for this product

SECTION XIII – DISPOSAL CONSIDERATIONS

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION XIV – TRANSPORT INFORMATION

DOT HAZARD CLASS	Not Hazardous
UN NUMBER	N/A
PACKING GROUP	N/A
SHIPPING NAME	N/A

SECTION XV –REGULATORY INFORMATION

This product is considered non-hazardous under the OSHA Hazard Communication Standard 29 CFR 1910.1200.
EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (SARA TITLE III):
Section 311/312 Categorizations (40 CFR 370): Immediate (Acute) Health Hazard.
Section 313 Information (40 CFR 372) – Toxic Chemicals List: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:Component: none. Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): None listed.

SECTION XVI –OTHER INFORMATION

CREATION DATE	06/10/2009
REVISION DATE	06/01/2016
REVISION NOTE	SDS - 16 Section
AUTHOR	IT Department

WATER-BASED LINER ADHESIVE

Product Data Sheet

Description

Elgen's Water - Based Liner Adhesive is an economical, water-based product for bonding insulation to metal surfaces. A non-oxidizing vinyl copolymer adhesive with excellent temperature and moisture resistance after curing, it forms a durable bond that will not become brittle with age.

Standard Construction

Properties	Value
Composition	A high solids, water base adhesive that is non-flammable when wet.
Color	White/Black
Viscosity	2000 to 3000 cps
Solids Content	37% ± 2%
Weight per Gallon	10.0 ± 0.1 #/gallon
Drying time	Tack-free: 3 to 4 hours (depending on humidity and temperature) Complete drying: 2 to 3 days at room temperature
Application and storage	KEEP FROM FREEZING 50°F TO 100°F Store and ship at temperatures above 32°F. Use within 6 months after receipt.
Service temperature	0°F to 180°F
Flammability	Wet - Non-flammable. Dry - Slow burning.
Clean-up	Thin with water. Clean up when wet with warm water. Dry clean up with aromatic or chlorinated solvents.

Features

This adhesive can be sprayed, brushed, or rolled and is designed for both manual and automatic applications. It provides excellent results with easy cleanup. Our duct liner adhesive contains antimicrobial agents that remain effective after the adhesive has cured.

Non-flammable, no unpleasant odors or hazardous fumes. Safe to use in enclosed areas.

Easy clean up with warm water

Good wet-tack

Fast drying with high tack.

Excellent coverage.

Contains zero VOC (volatile organic compounds).

Meet Requirements For Iowa Precision Coil Lines.

LEED Compliant

Meets requirements of NFPA 90A & 90B
Meets requirements of ASTM C-916

Packaging

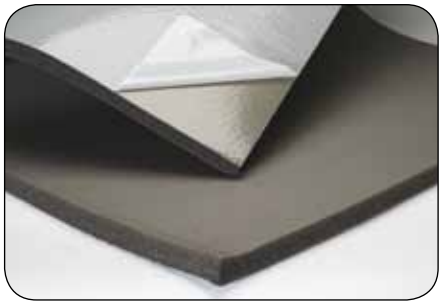
5 Gallon Pails
52 Gallon Drums

Guarantee

All Elgen products are guaranteed by Elgen Manufacturing against defective material.

Elgen Manufacturing
10 Railroad Ave, Closter NJ 07624
Tel: 800.503.9805 :: Fax: 201.964.9030
info@elgenmfg.com :: www.elgenmfg.com

K-FLEX DUCT® LINER GRAY



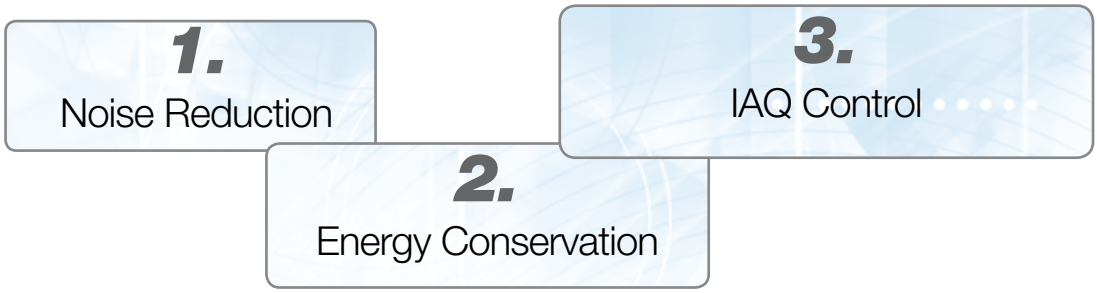
Flexible, Closed Cell Elastomeric Foam Insulation
Responsive to Market
Industry & Product Expertise
3rd Party Certified Products
25/50-rated up to 2" thick
Systems Approach
Factory-applied Options
14 Production Facilities Worldwide

K-FLEX USA
INNOVATION IN INSULATION

DUCT LINER BENEFITS

A key design objective of modern residential, commercial and industrial facilities is to incorporate a concern for energy consumption, as well as occupant comfort and safety. A healthier, more productive and more attractive environment depends in large part on well-designed and properly-insulated HVAC duct systems, which carry air to conditioned spaces inhabited by people, sensitive equipment, or a combination of both.

The advent of enhanced Indoor Air Quality (IAQ) has influenced engineers to 1) keep interior ducts free of foreign materials that bring fibers into the air stream, absorb moisture, or support mold growth, and 2) address sound reduction mechanically through deflection and other methods. However, not using interior insulation results in increased transferred noise, energy loss, and higher cost solutions. Using a fiber-free, closed cell elastomeric liner provides a solution for all of these issues.



TECHNICAL PROPERTIES

COMPARISON BETWEEN MATERIALS

	K-FLEX Duct® Liner Gray Closed Cell Elatomeric	Fibrous	Semi-Closed Cell Elastomeric
Closed Cell Structure	Yes	No	No
Flexible	Yes	Yes	Yes
Thermal k (75°F mean)	0.25	0.23	0.25
water vapor transmission (wvt) without jacketing (perm-in)	<0.06	25.00	Info not available
25/50 flammability rating	Yes (2")	Yes	Yes (1")
Service Temperature (°F)	-297°F to +220°F	0°F to +250°F	-297°F to + 180°F
Density (pcf)	3 - 4	1.5 - 3	3 - 6
Available with PSA	Yes	No	No
Fiber-free	Yes	No	Yes
Non-porous	Yes	No	No
Resists Dirt Accumulation	Yes	No	Yes
NRC Value (1")	0.50	0.75	0.60

NOISE REDUCTION

Effective noise reduction in ducts requires an integrated strategy of good mechanical layout, vibration isolation and insulation with noise absorbing properties. Acoustic performance can be categorized into two functions: noise reduction (absorption) and sound barrier. For duct lining applications, the primary acoustical goal of the insulation is to achieve noise reduction through the absorption of sound waves and the subsequent conversion of sound energy into heat. The insulation absorbs noise from the air handler (fan) and room, and prevents it from traveling down the duct and exiting at the vent openings.

Noise reduction, quantified by the Noise Reduction Coefficient (NRC), measures the percentage of sound absorption in a reverberation room by determining noise decay rate. K-FLEX Duct® Liner Gray outperforms fibrous, and is comparable to semi-closed cell elastomeric, in absorbing noise at low frequencies associated with equipment rumble (125 - 500 Hz), which is the #1 target for acoustical treatment. Noise from higher frequencies, i.e. high pitched screeching, is the result of a mechanical problem downstream and is not usually a consideration.

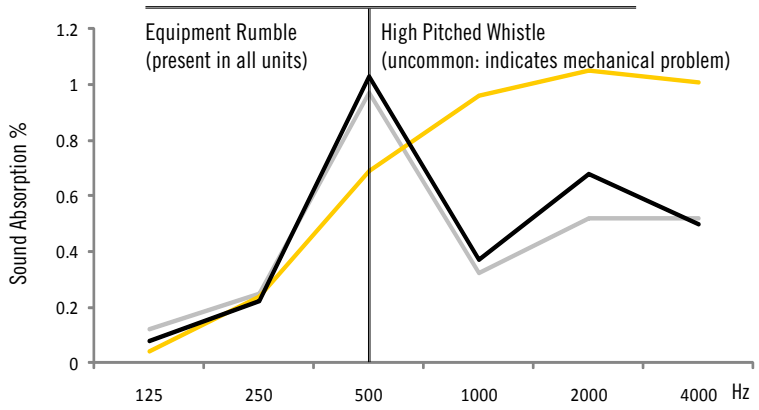
Sound barriers, quantified by the Sound Transmission Loss (STL), reduce the amount of noise that pass through an area being by reflecting the sound waves back to its source. STL values are defined as the difference in decibels (dB) between the average sound pressure levels in the source and receiving rooms before and after acoustic treatment which are then used to determine the Sound Transmission Class (STC) of the product. Sound barrier properties are generally related to the mass of the material in that the higher the mass, the higher (better) the STC value. In the case of metal air ducts, the metal duct itself is a good barrier material and the insulation is not a major contributor as a sound barrier. When STC values are given for duct lining materials, they are often tested as a composite (insulation and metal together) as this provides a more accurate measure of the STL of the application and if the insulation were tested by itself, it would not provide a very high value. It should be noted however, that insulation, when adhered to the duct will reduce noise created by vibration from the duct.

Sound Performance Comparison

K-FLEX DUCT® LINER GRAY

Fiberglass

Semi-Closed Cell Elastomeric



Sound Absorption	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1" K-FLEX Duct® Liner Gray	0.12	0.25	0.97	0.32	0.52	0.52	0.50
1" Fibrous*	0.04	0.24	0.69	0.96	1.05	1.01	0.75
1" Semi-Closed Cell Elastomeric*	0.08	0.22	1.03	0.37	0.68	0.50	0.60

*Sound Barrier***	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	STC
1.5" K-FLEX Duct® Liner Gray	12	10	13	14	22	31	16

*Taken from manufacturer's published data.

**Tested as insulation only. Testing conducted with insulation attached to metal would lead to high STC rating around 25.

ENERGY CONSERVATION

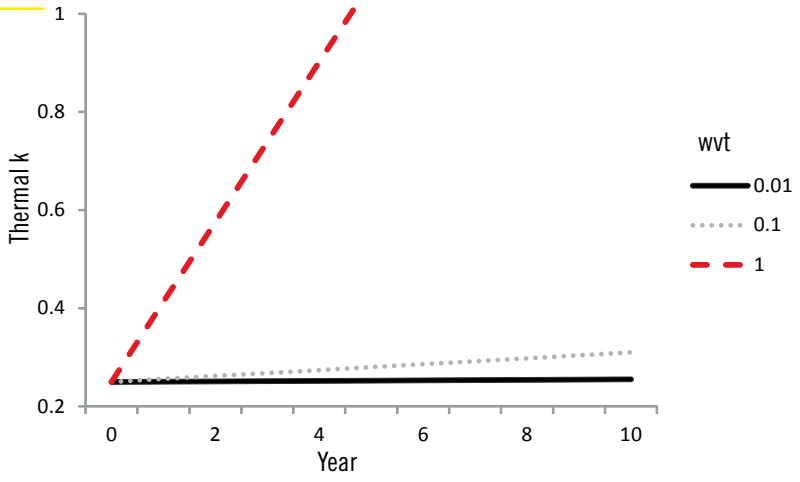
Thermal insulation is commonly used to reduce energy consumption of HVAC systems and equipment. If improper insulation is used, potential threats include heat loss through duct walls and moisture intrusion into the interior structure of the insulation. Since water is a very good conductor, the capability of an insulation material to slow water vapor from penetrating into its interior structure is fundamental for the long-term efficiency of the application.

SMACNA allows 5% moisture intrusion for fiberglass liner, **BUT:** *For every 1% moisture gain, the insulation effectiveness drops 7.5%.* As indicated below, if the wvt of the insulation is less than 0.10 perm-in, there will be minimal long-term effects on the k-value.

	k-value (75°F mean)	wvt (perm-in) unjacketed
Closed Cell Elastomeric	0.25	0.05
Fibrous	0.23	25.00
Semi-Closed Cell Elastomeric	0.25	not published

Thermal k performance over time with moisture gain (10 years)

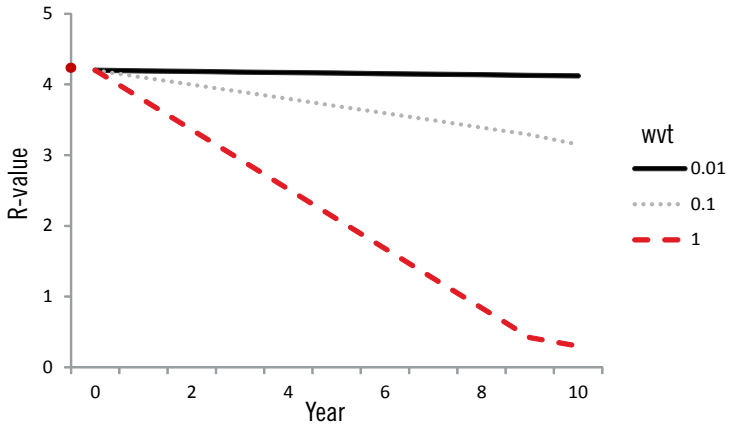
wvt (perm-in)	.01	.10	1.00
k-value (start)	.250	.250	.250
k-value (10 years)	.255	.310	1.88



R value performance over time with moisture gain (10 years)

An R-value of 4.2 is required by IECC, ASHRAE and nearly every state building code.

wvt (perm-in)	.01	.10	1.00
R-value (start)	4.2	4.2	4.2
R-value (10 years)	4.12	3.15	0.55



IAQ CONTROL MOLD RESISTANCE / LOW VOC / NON-FIBROUS

For an insulation material to defend against indoor air quality (IAQ) problems, it must resist condensation and moisture intrusion that can lead to mold, and ensure that the air passing over it does not contain fibers or dust. In ductwork that functions using conditioned air, the formation of condensation on the surface of the insulating material, within it, or on the outside of the metal is a negative factor.

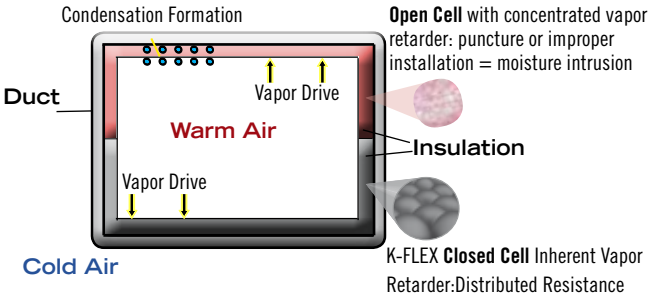
Condensation forms as a result of the direct contact of warm humid air with a cold surface if the temperature of the surface is lower than the Dew Point of the humid air. The surface temperature of a duct and of the insulation depends on the application conditions and the R-value of the insulation material. If the insulation material is vapor permeable, moisture can move inside the insulation to reach areas where the temperature is low enough to have condensation, even if the surface temperature of the insulation is high enough to prevent surface condensation. An insulation material with low wvt would prevent this situation from occuring.

K-FLEX Duct® Liner Gray has tested as being mold resistant to ASTM G 21 standards. This is a result of a closed cell structure that inherently resists moisture and wicking, an added anti-microbial agent, a smooth surface skin that resists dirt accumulation, and a fiber-free composition that makes it non-particulating and non-eroding. K-FLEX Duct® Liner Gray is **GREENGUARD® certified** as a low VOC material, meeting the requirements for the *"Children & Schools"* and *"Indoor Air Quality"* classifications.

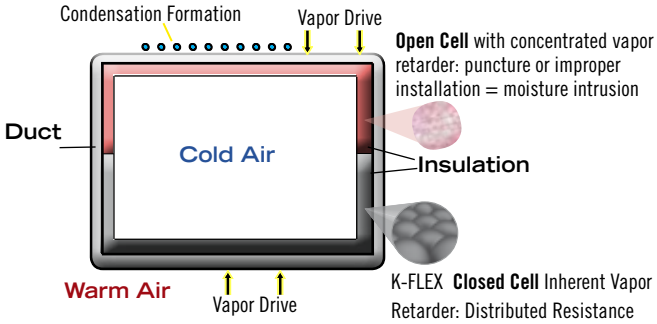
In contrast, fibrous or open cell materials rely on a concentrated moisture vapor barrier (foil jacket or surface-applied coating). If the barrier is damaged (even a pinhole) or the edges are not properly sealed, they are susceptible to moisture intrusion and subsequent mold growth. Once moisture penetrates, it can wick and involve large areas in the mold growth process. The *EPA & NAIMA* recommend the immediate removal of wet fiberglass to prevent mold, which means additional costs.

A study published in the April 2004 issue of *ASHRAE Journal* showed that an inspection of 150 office buildings with fiberglass duct liner revealed that 92% of them had fungal growth. Semi-closed cell elastomeric insulation would also be susceptible to moisture intrusion. Often times, the insulation can have moisture issues before the building is enclosed or commissioned.

Winter: Cold air outside duct, warm air inside duct



Summer: Warm air outside duct, cold air inside duct



Result w/ Fibrous: Mold growth on insulation

Result w/ Fibrous: Mold growth on ceiling from water drip (corrosion on duct also possible)

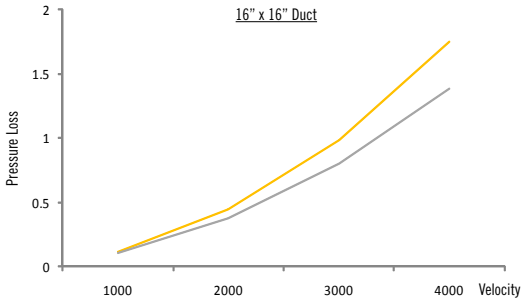
PERFORMANCE

- Reliable: Excellent thermal k after 10 years
- Temperature Range: -297°F to +220°F
- Low perm (<0.06 perm-in) without jacketing = No vapor barrier facing / edge treatment needed
- Available with or without factory-applied PSA
- Inherently high mold & mildew resistance
- Fiber-free & Low VOC = IAQ
- GREENGUARD® Certified - Children & Schools™ Classification for low VOC & Microbial Resistance Listing
- Contains an EPA-registered antimicrobial agent for added protection
- No erosion, cracking or delamination at high velocity air flow rates
- Low pressure loss (values comparable to fiberglass)**
- Sustainable: Lasts the life of the system

PROPERTY	RATING	CRITERIA
NRC 1”	0.50	ASTM C 423
STC 1.5” (insulation only)	16	ASTM E 90
wvp	<0.06 perm-in	ASTM E 96
Water Absorption	<.2%	ASTM C 209
Thermal k	0.25 (Btu-in/h-ft^2-°F)	ASTM C 177 & C 518
R-value	1” = 4.2, 2” = 8	
Fire Rating	25/50 up to 2” thick Pass	ASTM E 84 NFPA 90 A / 90 B
Air Erosion	Pass up to 10,000 fpm	UL 181
Mold	Pass	ASTM G 21
Energy Rating	Complies	ASHRAE 90.1
Elastomeric Duct Lining Requirements	Pass	ASTM C 1534

**PRESSURE LOSS (H_2O/100 ft):
K-FLEX DUCT® LINER GRAY vs. Fiberglass

Velocity (ft/m)	10” x 10”	16” x 16”	24” x 24”
1000	.311 / .207	.102 / .114	.052 / .068
2000	1.007 / .806	.377 / .443	.207 / .266
3000	2.021 / 1.797	.799 / .988	.473 / .594
4000	3.467 / 3.179	1.386 / 1.748	.849 / 1.050



SPECIFICATION COMPLIANCE

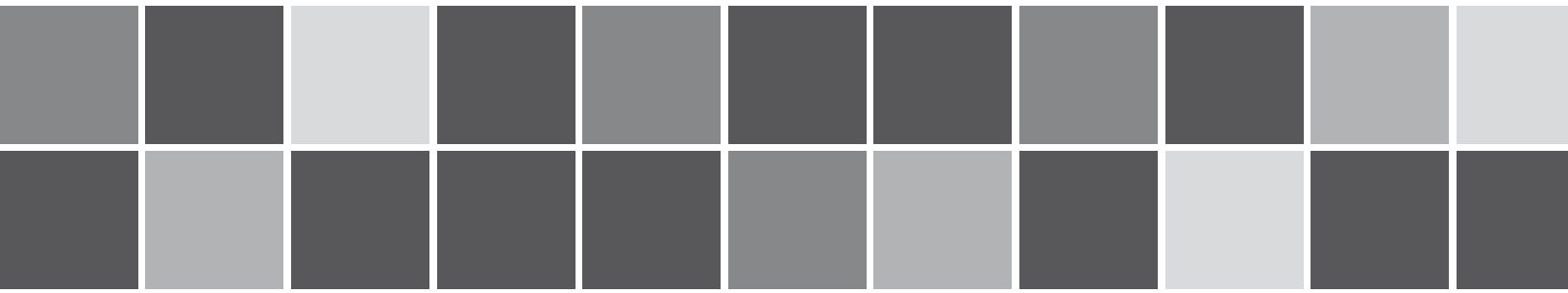
- ASTM C534 Type 2 (Sheet), Grade 1
- ASTM C1534
- ASTM D1056-00-2C1
- ASTM C423/E795 NRC=0.50 at 1” thickness
- New York City MEA 186-86-M Vol. V
- USDA & RoHS Compliant
- UL 94-5V Flammability Classification (Recognition No. E300774)
- ASTM E84: 25/50 at 2” and below
- Meets requirements of NFPA 90A 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)
- GREENGUARD certified under the “Children & Schools” and “Indoor Air Quality” classifications

INSTALLATION & MAINTENANCE

- No Double Wall required to prevent air erosion or airborne fibers
  - On average, double wall is 60% more expensive than single wall
  - No need to wrap in mylar
  - No need to finish (seal) exposed edges
- Easy to fabricate & install (use SMACNA guidelines)
  - No issues using weld pins or impact-applied fasteners
  - (K-FLEX recommends pins & adhesives to fasten liner to metal)
  - Easy to cut manually or with an automated machine
  - Works well with automated, semi-automated, and handheld equipment
- Flexible: non-rigid, non-breakable
- No protective clothing required during installation
- Safe: Non-dusting, Non-wicking, Non-abrasive, Non-itching
- Low Maintenance
- Easy to Clean – Smooth and Durable Surface, Resists Tearing
- Available with factory-applied pressure sensitive adhesive (PSA)

PROJECT REFERENCE LIST

- Bellefonte High School, Pennsylvania
- City Of Doral Courthouse, Florida
- Washington State University Veterinary Science Building, Washington
- Finn Hill School, Washington
- Allegheny College, Pennsylvania
- Pine Richland High School, Pennsylvania
- Taunton Courthouse, Massachusetts
- University of Massachusetts, Massachusetts
- Massachusetts Department of Transportation, Massachusetts
- Kelowna General Hospital, British Columbia, Canada
- Bloomsburg University, Pennsylvania
- Woodward Elementary School, British Columbia



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INNOVATION IN INSULATION

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