

## **KINETICS™ KNM-100/200AL**

### **NOISE BARRIER MATERIAL**

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#### **Description and Application**

Fire-resistant noise barrier material for wrapping ducts, valves and pipelines. Designed for indoor or outdoor use, Kinetics KNM-100/200AL noise barrier material reduces risks due to burning, and retards smoke development and flame spread. The material is designed to reduce sound transmission from HVAC duct, fluid or gas pulsations in pipelines for chemical, petrochemical, and waste water treatment plants and gas utility pressure-reducing stations.

The material is constructed of mass-loaded, limp vinyl with a layer of reinforced aluminum foil facing on one side. The vinyl provides mass and flexibility, while the aluminum adds increased mechanical strength, weatherability, attractive appearance, and improved fire retardancy.

The non-lead composition of the material allows for safe handling and easy installation. When applied over an insulation material such as fiberglass, foam,

ceramic fiber or mineral wool, Kinetics fire-resistant barrier material is simply cut to length, wrapped around the pipe or duct, and fastened with tape, mechanical fasteners, or bands.

#### **Specification**

The barrier shall be constructed of a 0.10" or 0.20" (3 or 6 mm) thick, mass-loaded, limp vinyl sheet bonded to a thin layer of reinforced aluminum foil on one side. The barrier shall have a nominal density of 1.0 or 2.0 psf (4.88 or 9.76 kg/sq. m.). The 1.0 psf barrier shall exhibit minimum flammability ratings of 0.0 seconds from flame out and afterglow and 0.2 inch (5 mm) for char length when tested in accordance with Federal Test Std. No. 191-5903. The barrier shall have a minimum thermal conductivity "K" value of 0.29 and a rated service temperature range of -40°F to 220°F (-40°C to 104°C).

The barrier shall be model KNM-100AL or KNM-200AL as manufactured by Kinetics Noise Control, Inc.

## Technical Data

### Sound Transmission Loss (TL)

1.0 psf mass loaded vinyl tested as free hanging barrier

Freq., Hz	125	250	500	1000	2000	4000	STC
1# TL, dB	13	17	21	28	33	40	26
2# TL, dB	21	22	27	32	37	42	31

### Insertion Loss (IL)

2.0 psf Model KNM-200AL tested as wrapping over 2" thick, 5 pcf fiberglass around steel rectangular duct.

Freq., Hz	63	125	250	500	1000	2000	4000
2# TL, dB	5	9	18	28	34	37	37

**Service Temperature:** -40°F to 220°F (-40°C to 104°C)

**Thermal Conductivity:** K=0.29

$$\frac{\text{BTU-IN}}{\text{HR-FT}^2\text{-}^\circ\text{F}} \left( \frac{0.36 \text{ cal-cm}}{\text{HR-CM}^2\text{-}^\circ\text{C}} \right)$$

### Flammability Per Fed. Test Std. No. 191-5903

Flame Out: 0 sec  
 Afterglow: 0 sec  
 Char Length: 0.2 inch (5 mm)

### Corrosion Resistance:

Excellent for most oils, grease, acids, and mild alkalis.

**Material Thickness:** 0.10" (3 mm)

### Material Roll Size:

KNM-100AL - 54" x 60' (1.4 m x 18 m)

KNM-200AL - 54" x 30' (1.4 m x 9 m)

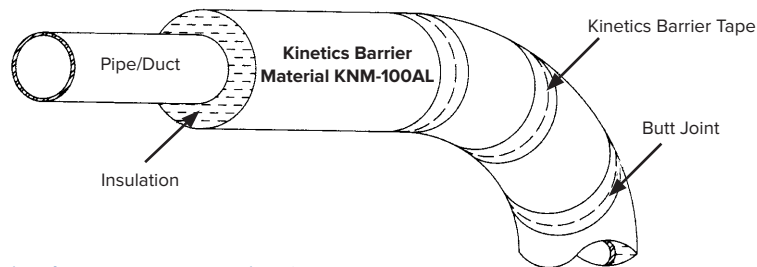
## Fire Test Data

### KNM-100AL Surface Burning Characteristics (ASTM E84)

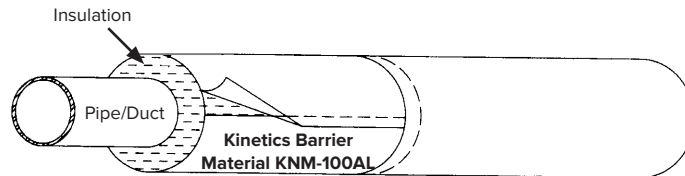
Flame Spread Index - 10

Smoke Developed Index - 40

### Pipe/Duct Wrap Detail - Butt Joint Method



### Pipe/Duct Wrap Detail - Overlap Method



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