

SUBMITTAL RECORD \_\_\_\_\_  
 JOB \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 SUBMITTED TO \_\_\_\_\_  
 SUBMITTAL PREPARED BY \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_  
 DATE \_\_\_\_\_



# Submittal Form Vinyl Foam Gasket



## DESCRIPTION

Wherever flanges are used in connecting parts of a duct system, the potential for air leakage exists. Besides contributing to energy waste, leaks can also create noise. Sealing of ductwork can be accomplished with the use of gasket which adheres to flanged surfaces. When this material is attached to a flange which is then assembled to a second flange, the material is compressed and fills gaps and irregularities creating a seal.

## TYPICAL PROPERTIES

**Type:** Low Density PVC Foam  
**Color:** Black/Gray  
**Density:** 7-10  
**Hardness:** 25  
**Force to Compress:** 3.6 psi  
**Water Absorption:** 3% (by volume)  
**Tensile Strength:** 30 psi  
**Elongation:** 190%  
**Flammability:** FM VSS 302  
**Temperature Use (remains flexible):** -20°F to 80°F  
**Compression Deflection:** 1.3 psi

VINYL FOAM (PVC)			
ITEM#	CODE	DESCRIPTION	LENGTH
8123	PVC 1812	1/8" x 1/2"	50'/RL
8124	PVC 1434	1/4" x 3/4"	50'/RL
8125	PVC 3834	3/8" x 3/4"	50'/RL

## SUGGESTED SPECIFICATIONS

All flanged joints shall be sealed with gasketing, coded \_\_\_\_\_ as supplied by Duro Dyne Corporation.

## RELATED SMACNA RECOMMENDATIONS\*

### 1.4.1 - Duct Sealing

Ducts must be sufficiently airtight to ensure economical and quiet performance of the system. It must be recognized that airtightness in ducts cannot, and need not, be absolute (as it must be in a water piping system). Codes normally require that ducts be reasonably airtight. Concerns for energy conservation, humidity control, space temperature control, room air movement, ventilation, maintenance, etc., necessitate regulating leakage by prescriptive measures in construction standards. Leakage is largely a function of static pressure and the amount of leakage in a system is significantly related to system size. Adequate airtightness can normally be ensured by a) selecting a static pressure, construction class suitable for the operating condition, and b) sealing the ductwork properly.

The designer is responsible for determining the pressure class or classes required for duct construction and for evaluating the amount of sealing necessary to achieve system performance objectives. It is recommended that all duct constructed for the 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class meet Seal Class C. However, because designers sometimes deem leakage in unsealed ducts not to have adverse effects, the sealing of all ducts in the 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class is not required by this construction manual. Designers occasionally exempt the following from sealing requirements: small systems, residential occupancies, ducts located directly in the zones they serve, ducts that have short runs from volume control boxes to diffusers, certain return air ceiling plenum applications, etc. When Seal Class C is to apply to all 1 in. (250 Pa) and 1/2 in. (125 Pa) pressure class duct, the designer must require this in the project specification. The designer should review the *HVAC Air Duct Leakage Test Manual* for estimated and practical leakage allowances.

Seven pressure classes exist [1/2 in. (125 Pa), 1 in. (250 Pa), 2 in. (500 Pa), 3 in. (750 Pa), 4 in. (1000 Pa), 6 in. (1500 Pa), and 10 in. wg (2500 Pa)]. If the designer does not designate pressure class for duct construction on the contract drawings, the basis of compliance with the SMACNA *HVAC Duct Construction Standards* is as follows: 2 in. wg (500 Pa) for all ducts between the supply fan and variable volume control boxes and 1 in. wg (250 Pa) for all other ducts of any application.

Some sealants can adversely affect the release function of breakaway connections to fire dampers; consult the damper manufacturer for installation restrictions.

Seal Class	Sealing Requirements	Applicable Static Pressure Construction Class
A	Class A: All Transverse joints, longitudinal seams, and duct wall penetrations	4 in. wg and up (1000 Pa)
B	Class B: All Transverse joints and longitudinal seams only	3 in. wg (750 Pa)
C	Class C: Transverse joints only	2 in. wg (500 Pa)

In addition to the above, any variable air volume systems duct of 1 in. (250 Pa) and 1/2 in. wg (125 Pa) construction class that is upstream of the VAV boxes shall meet Seal Class C

\*From *SMACNA HVAC Duct Construction Standards Metal and Flexible • Third Edition • 2005*

Duro Dyne East Division, Bay Shore, NY  
 Duro Dyne Midwest Division, Hamilton, OH  
 Duro Dyne West Division, Fontana CA  
 Duro Dyne Canada, Lachine, Quebec, Canada

631-249-9000 Fax: 631-249-8346  
 513-870-6000 Fax: 513-870-6005  
 562-926-1774 Fax: 562-926-5778  
 514-422-9760 Fax: 514-636-0328

www.durodyne.com E-mail: durodyne@durodyne.com



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