

SUBMITTAL RECORD _____
 JOB _____
 LOCATION _____
 SUBMITTED TO _____
 SUBMITTAL PREPARED BY _____
 APPROVED BY _____
 DATE _____



Specification Form DDS181 Water Based Duct Sealer

DESCRIPTION

Wherever there are seams or joints in ductwork or the sidewalls of the duct are pierced, 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 a viscous material which fills gaps and conforms to the surface without running.

Duro Dyne DDS-181 is a UL181A-M and UL181B-M listed non-flammable water based duct sealant designed for sealing joints in low to high pressure systems. Specially formulated to be used indoors and outdoors.

FEATURES

- Indoor/outdoor use
- UL181A-M and UL181B-M Listed
- Remains flexible
- Non-flammable

TYPICAL PROPERTIES

Type: Vinyl Acetate
Solids: 69 ± 2%
Weight: 11.6 ± .2 lbs./gal.
Color: Grey
Odor: Mild/Wet; Bland/Dry
VOC: 22 gms./ltr.
Viscosity: 140,000-180,000 CPS # 7 Brookfield, 20 RPM @ 70°F
Flammability: Non-Flammable
Effect of Freezing: No damage - 3 Cycles
Storage Life: Gallons-1 year at 70°F, Cartridge-9 months at 70°F
Clean With: Water/Detergent
Cure Time: 48 hours
Method of Application: Brush, trowel, putty knife or caulking gun. As a general practice, it is advisable that liquid products be stirred prior to use.



File #: MH19757

Underwriters Laboratories, Inc.
 Classified Adhesive 309U

Flame Spread 10
 Smoke Developed 10

ITEM#	CODE	DESCRIPTION
5011	DDS181-1	DDS181 - 1 Gallon Pail
5013	DDS181-5	DDS181 - 5 Gallon Pail
5010	DDS181-C	DDS181 Cartridge

SUGGESTED SPECIFICATIONS

All potential points of leakage on the ductwork shall be sealed with a vinyl acetate water based duct sealer coded EDS as manufactured 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.

Table 1-1 Standard Duct Sealing Requirements

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	631-249-9000	Fax: 631-249-8346
Duro Dyne Midwest Division, Hamilton, OH	513-870-6000	Fax: 513-870-6005
Duro Dyne West Division, Fontana, CA	562-926-1774	Fax: 562-926-5778
Duro Dyne Canada, Lachine, Quebec, Canada	514-422-9760	Fax: 514-636-0328
www.durodyne.com E-mail: durodyne@durodyne.com		

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