

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



Specification Form DLSN Duct Lock Sealant



DESCRIPTION

Wherever there are joints in ductwork, 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 in the longitudinal lock of assembled rectangular duct.

DLSN is designed for sealing metals and masonry surfaces without the need or requirement of a primer. It effectively blocks the infiltration of gases, dust and other contaminants, and the exfiltration of conditioned air. DLSN is a gray, single-component material that is non-drying and permanently flexible. The DLSN in the 5 gallon & 52 gallon containers is a pumpable sealant and is ideal for use in automated injection systems.

FEATURES

- Single active component material
- Non-drying
- Permanently flexible
- No need for a primer
- Non-corrosive
- Non-toxic
- Adheres to oily metal surfaces, painted and unpainted galvanized steel or aluminum
- Gray
- Conforms to ASTM D71-72
- 5 gallon & 52 gallon containers are pumpable

TYPICAL PROPERTIES

Type: Butyl Rubber, resins, inert pigments
Solids: 90% approximate
Weight: 12-13 lbs./gal.
Color: Grey
Odor: Petroleum Naptha
VOC: 72 gms./ltr.
Viscosity: 130,000 to 165,000 cps Brookfield
Flammability: Flammable
Effect of Freezing: N/A
Storage Life: One year (Unopened drum or bucket)
Clean With: Small spills- Mineral-Spirits / Large spills- Absorbents like Clay
Cure Time: 72 hours

Independent E84 test performed:
 Flame Spread - 0
 Smoke Developed - 0

ITEM#	CODE	DESCRIPTION
5052	DLSN-C	Duct Lock Sealant - Cartridge
5065	DLSN-5	Duct Lock Sealant - 5 Gallon Pail
5068	DLSN-52	Duct Lock Sealant - 52 Gallon Drum

SUGGESTED SPECIFICATIONS

All longitudinal Pittsburgh Locks of metal duct shall be sealed according to SMACNA Duct Construction Standard Section 1.6 and 1.7. Sealer shall be Butyl Rubber Based conforming to federal specification TT-S-001657 TYPE 1. Sealer shall be DLSN 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. (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*

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 Printed in the USA 6/2021
 BO005421

