



# FDS-181

## Product Data Sheet

### PROPERTIES

**COLOR:**

White, Gray or Black

**APPLICATION CONSISTENCY:**

Brush, Trowel, Glove or Power Extrusion

**AVERAGE WEIGHT / U.S. GALLON (ASTM D1475):**

12.0 lbs. (1.44 kg/l)

**AVERAGE NON-VOLATILE (ASTM D2369):**

69% by weight

**COVERAGE RANGE:**

Brush: 45 – 55 sq. ft./gal. (1.10 – 1.35 m<sup>2</sup>/l)  
0.036 – 0.029 in. (0.9 – 0.7 mm) wet film thickness

**DRYING TIME 73°F (23°C) 50% RH:**

Set to Touch: 1 Hour

Dry Through: 16 Hours

**SERVICE TEMPERATURE LIMITS:**

20°F to 200°F (-7°C to 93°C)

**WET FLAMMABILITY:**

No flash to boiling, 210°F (99°C)

**SURFACE BURNING CHARACTERISTICS (ASTM E84):**

Flame Spread: 20

Smoke Developed: 15

Tested at coverage rate of 45 sq. ft. per gal. (1.1 m<sup>2</sup>/l) in a 3 in. (7.6 cm) strip. Applied to rigid fiberglass duct board. Type 475, covered with foil/scrim/kraft paper facing material.



UL 181A-M  
UL 181B-M  
6P84

### AIR-TIGHT™ FDS-181 DUCT SEALANT

**AIR-TIGHT™ FDS-181 DUCT SEALANT** is a fire-resistive, fibrated, water-based sealant for indoor or outdoor low, medium and high velocity heating and air conditioning ducts. It performs as a tough and flexible adhesive and sealant, forming a durable seal against air leakage on faced duct board, flex duct and galvanized, aluminum and stainless steel metal ducts. Mechanical fasteners of the type and number normally used for duct assemblies are required to provide rigidity to the duct system.

**AIR-TIGHT™ FDS-181 DUCT SEALANT** is excellent for duct closure and butt joint seam sealing on both flexible and rigid faced fiberglass duct systems and sealing connections and penetrations in all metal ducts. It is non-flammable and has a mild odor when wet. It dries odor free.

**AIR-TIGHT™ FDS-181 DUCT SEALANT** is ideal for vapor sealing ASJ, FRK and FSK jackets and board facings on rigid duct board at joints, laps and over staples and punctures.

**AIR-TIGHT™ FDS-181 DUCT SEALANT** meets NFPA 90A and 90B 25/50 requirements.

**AIR-TIGHT™ FDS-181 DUCT SEALANT** meets all SMACNA pressure classes up to 10" w.g. and SMACNA seal classes A, B and C on ducts constructed to SMACNA standards.

**AIR-TIGHT™ FDS-181 DUCT SEALANT** has low VOC content and meets requirements of:

- MAS Certified Green®
- California Dept. of Public Health Standard Method v1.2
- VOC Emissions and Content requirements to contribute to **LEED v4** EQ Credit: Low Emitting Materials – Paints and Coatings
- Collaborative for High Performance Schools EQ 7.1
- SCAQMD Rule 1168



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**LIMITATIONS**

Store and apply between 40°F (4°C) and 100°F (38°C), protect from freezing until dry.

Use of mesh reinforcement is required for applications meeting UL181A Closure systems

**H.B. Fuller Construction Products Inc.**

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# **APPLICATION GUIDE FOR AIR-TIGHT™ 181 DUCT SEALANT FDS-181 UL 181A-M & 181B-M LISTED**

## **MATERIAL PREPARATION**

DO NOT THIN. Apply only to clean, dry, oil-free surfaces. Keep container closed when not in use.

## **APPLICATION**

### **UL 181A MASTIC CLOSURE OF UL 181 RIGID FIBERGLASS AIR DUCTS:**

Apply to the surface by brush, trowel or power extrusion. Uniformly brush out at 3" – 4" wide tack coat over the stapled and smoothed joint at the nominal rate of 1.12 gal./100 sq. ft. (0.46 l/m<sup>2</sup>). Embed the reinforcing membrane into the tack coat, taking care that all of the mesh is filled. Pull the membrane taut and apply a second coat at the nominal rate of 1.12 gal./100 sq. ft. (0.46 l/m<sup>2</sup>). Allow the completed joint to dry at least 24 hours above 70°F (21°C) before pressure testing. High humidities (over 70%) and/or cooler temperatures may retard drying. Total (mastic plus scrim plus mastic) wet film thickness to be 36 mils. Fiberglass scrim to be 5 mils thick, 20x10 plain weave weighing 1.75 oz/yd<sup>2</sup> (59 g/m<sup>2</sup>).

### **UL 181B MASTIC CLOSURE OF UL 181 FLEXIBLE AIR DUCTS:**

Apply to clean, dry, oil-free surface by brush, trowel or power extrusion. Uniformly brush out at 2" wide coat over the joint at the nominal rate of 1.87 gal./100 sq. ft. (0.76 l/m<sup>2</sup>). Total coverage rate to be 53.5 sq. ft./gal. (1.31 m<sup>2</sup>/l). Allow the completed joint to dry at least 24 hours above 70°F (21°C) before pressure testing. High humidities (over 70%) and/or cooler temperatures may retard drying. Total wet film thickness to be 30 mils (0.76 mm).

### **METAL DUCT SEALANT**

Apply at a rate of 50 – 55 sq. ft./gal. (1.23 – 1.35 m<sup>2</sup>/l). Work into crevices and ensure sealant film bridges all gaps maintaining minimum film thickness over seams. Reinforcing membrane is not required for sealing metal duct. Allow the completed joint to dry at least 24 hours above 70°F (21°C) before pressure testing.

### **OTHER DUCT CLOSURE APPLICATIONS:**

For other applications sealing foil faced insulation boards and duct wrap the use of a reinforcing membrane may be optional and shall be used depending on the system design. Apply at a rate of 50 – 55 sq. ft./gal. (1.23 – 1.35 m<sup>2</sup>/l). Allow the completed joint to dry at least 24 hours above 70°F (21°C) before pressure testing.

High humidities (over 70%) and/or cooler temperatures may retard drying. For best results, do not exceed 1/8" (3.2 mm) wet film thickness. AIR-TIGHT™ Duct Sealant is weather, water and UV resistant, allowing it to be used outdoors and in high humidity environments. LIMITATIONS: Always test foil and paper facings for acceptable adhesion before using. Outdoor horizontal surfaces must always drain completely. A pitch of at least 1/4" per foot (2 cm/m) is required. To resist rain washoff, allow at least 12 – 15 hours drying time above 40°F (4°C), with a relative humidity of 50%. Higher humidity or lower temperatures may retard drying.

### **POWER EXTRUSION:**

AIR-TIGHT™ Duct Sealant may be applied using a wide variety of power (pressure) extrusion equipment suitable for use with water-based sealants. It is a soft buttery gel with a typical viscosity range of 130,000 – 150,000 cps. Corrosion resistant pumps and fittings are suggested.

## **CLEAN UP**

Use fresh water to clean brushes and equipment before product dries. Dry product may be removed with hot soapy water or strong solvents such as chlorinated solvent (non-flammable) or mineral spirits (flammable).

## **CUSTOMER SERVICE: 833-849-3700**

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ADEQUATE TESTS: The information contained herein we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be performed by you to determine if this product meets all of your requirements. The warranted shelf life of our products is twelve months from date of shipment to the original purchaser or as otherwise provided on the certificate of analysis.

**For professional use only. Keep out of reach of children.  
Consult Safety Data Sheet and container label for further information.**