



Mastics, Coatings, Adhesives, Sealants

CHIL-TUFF™ CP-181-1 HVAC Duct Sealant

INDOOR / OUTDOOR WATER-BASED DUCT SEALANT AND MASTIC

DESCRIPTION

CP-181-1 is a fibrated water based duct sealant and mastic for use on heating, ventilating, and air conditioning duct systems. It is easily applied by brush and will not drip or sag. When dry it forms a tough, flexible, UV and water resistant air seal.

USES

CP-181-1 is used to seal all high, medium and low pressure HVAC systems including metal and flexible ductwork and fiberglass duct board. Application by trowel or brush readily fills the joints of round or rectangular, ductwork, diffusers, and mixing boxes. CP-181-1 can also be used as a duct closure mastic for vapor sealing ASJ, FRK, and FSK jackets and board facings at joints, laps and over staple and weld pin punctures.

ADVANTAGES

- Water based for personal & environmental safety.
- Application is quick & easy for economical installation.
- Dries firmly & forms a strong, resilient, fibrated seal.
- Creates a permanently flexible seal (even when system cycles between high & low temperatures).
- Resistant to fire, oxidation, cracking, moisture, & water.
- Long service life. both indoors and out
- Quick & efficient clean-up of tools with hot water when sealant is wet.

LIMITATIONS

- Store and apply between 40°F (4°C) and 100°F (38°C); protect from freezing.
- To resist rain washoff, allow at least 16 hours drying time above 40°F (4°C), with a relative humidity of 50%.
- Always test foil and paper facings for acceptable adhesion.
- Outdoor horizontal surfaces must always drain completely. A pitch of at least ¼ inch per foot (2 cm/m) is required.
- Mechanical fasteners of the type and number normally used for duct assemblies are required to provide rigidity to the duct system.

CERTIFIED

- **CP-181-1 Duct Sealant** is produced under the classification and follow-up service of Underwriter's Laboratories, Inc.
- Meets NFPA 90A and 90B 25/50 requirements.
- Meets requirements for **LEED IEQ 4.1** Low-emitting Materials, Adhesives and Sealants. VOC: 40 g/l, less water and exempt solvents.
- Meets all SMACNA pressure classes up to 10" w.g. and SMACNA seal classes A, B and C on ducts constructed to SMACNA standards.

COLOR

Gray

WET WEIGHT

11.6 lbs. (1.35 kg/l)

AVERAGE NON-VOLATILE

69% by Weight

55% by Volume

SERVICE TEMPERATURE RANGE

(Temperature to which dry film is subjected.)

20°F to 200°F (-7°C to 93°C).

DRYING TIME

To Touch — 2 hours

Through — 16-24 hours

Temperature, humidity and film thickness will affect drying time.

COVERAGE

(Varies with substrate.)

50 sq. ft./U.S. gallon (1.22 sq. meters/liter)

FUNGAL GROWTH RESISTANCE (ASTM G 21)

Rating = 0, no fungal growth on surface

SHORE HARDNESS

Type A: 80

WATER VAPOR PERMEANCE:

ASTM D 3278 Procedure A, 0.45 perms (0.30 metric perms) at 35 mils (.9 mm) dry

CLEAN-UP

Warm soapy water.



UL 181B-M

6P84

ALSO CLASSIFIED for
Surface Burning Characteristics

Applied to Inorganic Reinforced Cement Board

Flame Spread: 5

Smoke Developed: 0

Tested as applied in two 2 in. wide strips spaced 8 in. on center at a coverage rate of 25.0 sq ft/gal.
312U

MADE IN THE USA

CP-181-1 contains no asbestos, lead, mercury, or mercury compounds.

H.B. Fuller Construction Products Inc.

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Application Guide and Suggested Procedures

MATERIAL PREPARATION

All surfaces where sealant will be applied must be clean, dry, and free of oil or grease prior to application. Do not thin. Keep container closed when not in use.

APPLICATION:

UL 181B MASTIC CLOSURE OF UL-181 FLEXIBLE AIR DUCTS:

Apply to clean, dry, oil-free surfaces by brush, trowel, or power extrusion. Brush out uniformly a 2" wide coat over the joint, at the nominal rate of 2 gal/100 sq ft (0.8 l/m²). Total coverage rate to be 45-55 ft/gal. (1.1-1.4 m²/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 32 mils ± 3 mils.

MASTIC CLOSURE OF RIGID FIBERGLASS INSULATION:

Apply to the surface by brush, trowel, or power extrusion. Brush out uniformly a 3"-4" wide tack coat over the stapled and smoothed joint, at the nominal rate of 1 gal./100 sq. ft. (0.4 l/m²). 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 gal./100 sq. ft (0.4 l/m²). 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 32 mils. Fiberglass scrim to be 5 mils thick, 20x10 plain weave weighing 1.75 oz/yd² (59 g/m²).

OTHER SEALING APPLICATIONS

Apply a continuous film of CP-181-1 Duct Sealant over all areas of the indoor or outdoor metal and flexible duct systems where air leakage may occur. A brush may be used to work the sealant into joints and remove excess. On spiral ducts apply a coat of CP-181-1 to the male end of the coupling prior to fitting the straight run of spiral duct over it. Brush excess CP-181-1 over the joint to complete the seal. Screw holes and flanges should also be sealed with a coat of CP-181-1. Over ASJ, FRK, and FSK jackets and board facings at joints, laps and over staple and weld pin punctures apply at a rate of 2 gal/100 sq ft (0.8 l/m²).

POWER EXTRUSION:

CP-181-1 Duct Sealant may be applied using a wide variety of power (pressure) extrusion equipment suitable for use with waterbase sealants. It is a soft buttery gel with a typical viscosity range of 130,000 – 160,000 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 Xylol (flammable).

CUSTOMER SERVICE: 800-832-9002

IMPORTANT: H.B. Fuller Construction Products Inc. warrants that each of its products will be manufactured in accordance with the specifications in effect on the date of manufacture. WE MAKE NO OTHER WARRANTIES AND EXPRESSLY DISCLAIM ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. OUR ACCEPTANCE OF ANY ORDERS FOR THE PRODUCT IS EXPRESSLY CONDITIONAL UPON PURCHASER'S ASSENT TO THE TERMS ON THE APPLICABLE INVOICE.

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 six months from date of shipment to the original purchaser.

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