

SECTION 15819

AIR DUCT SEALANTS

PART GENERAL

SECTION INCLUDES

Air duct sealants for permanently sealing fabricated joints and seams of HVAC air ducts and thermal insulation.

Reinforcing membrane for sealants.

RELATED SECTIONS

Section 15080 - Mechanical Insulation.

Section 15700 - Heating, Ventilating, and Air Conditioning Equipment.

Section 15810 - Ducts.

Section 15820 - Duct Accessories.

REFERENCES

ASTM D 1668 - Glass Fabrics (Woven and Treated) for Roofing and Waterproofing.

ASTM E 84 - Surface Burning Characteristics of Building Materials.

ASTM E 96 - Water Vapor Transmission of Materials.

UL 181 - Factory Made Air Ducts and Air Connectors.

UL 181A - Closure Systems for Use with Rigid Air Ducts and Air Connectors.

UL 181B - Closure Systems for Use with Flexible Air Ducts and Air Connectors.

SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Manufacturer's product data, including physical properties and application instructions.

DELIVERY, STORAGE, AND HANDLING

Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer and material.

Storage:

Store materials in accordance with manufacturer's instructions.

Storage Temperature: 40 to 100 degrees F (4 to 38 degrees C).

Protect from freezing.

ENVIRONMENTAL REQUIREMENTS

Do not apply below 35 degree F (2 degrees C) or above 120 degrees F (49 degrees C).

Avoid high humidity which will retard drying.

PART PRODUCTS

MANUFACTURERS

Acceptable Manufacturer: RCD Corporation; 2850 Dillard Road; Eustis, FL 32726; ASD. Tel: (352) 589-0099 or (800) 854-7494; Fax: (352) 589-0863.

Requests for substitutions will be considered in accordance with provisions of Section 01600.

Substitutions: Not permitted.

Supply all products specified in this section from a single manufacturer.

AIR DUCT SEALANTS

Low to High Velocity Air Duct Sealant: RCD "#6 Mastic" non-toxic, water-based, fiber-reinforced adhesive-sealant; for permanently sealing fabricated joints and seams of sheet metal air ducts, UL 181 listed rigid fiberglass air ducts, UL 181 listed flexible air ducts, and thermal insulation; for repairing damaged and leaking

air ducts; for sealing conditioned spaces from air infiltration.

Type: Elastomeric terpolymer emulsion.

Applied Research Laboratories Listed: UL 181

Underwriters Laboratories Listed: UL 181A-M and UL 181B-M.

Solids by Weight: 67 percent, plus or minus 2 percent.

Weight per Gallon: 10.5 pounds, plus or minus 0.20 pounds (4.76 kg plus or minus 0.09 kg).

Wet Film Coverage: 100 linear feet per gallon at 1/16 inch by 3 inches wide (8.05 m/L at 1.58 x 75 mm).

Consistency: Thixotropic, non-sagging.

Adhesive Cure: 72 hours at 50 percent humidity and 70 degrees F (21 degrees C).

Service Temperature Limits: Minus 10 degrees to 200 degrees F (minus 23 to 93 degrees C).

Flame Spread: Not greater than 5 in accordance with ASTM E 84.

Smoke Developed: Not greater than 0 in accordance with ASTM E 84.

Low to High Velocity Air Duct Sealant: RCD "#8 Mastic" non-toxic, water-based, adhesive-sealant; for permanently sealing fabricated joints and seams of sheet metal air ducts, UL 181 listed rigid fiberglass air ducts, UL 181 listed flexible air ducts, and thermal insulation; for repairing damaged and leaking air ducts; for sealing conditioned spaces from air infiltration.

Type: Elastomeric terpolymer emulsion.

Underwriters Laboratories Listed: UL 181A-M and UL 181B-M.

Solids by Weight: 74 percent, plus or minus 2 percent.

Weight per Gallon: 12.1 pounds, plus or minus 0.20 pounds (5.48 kg plus or minus 0.09 kg).

Wet Film Coverage: 100 linear feet per gallon at 1/16 inch by 3 inches wide (8.05 m/L at 1.58 x 75 mm).

Consistency: Thixotropic, non-sagging.

Adhesive Cure: 72 hours at 50 percent humidity and 70 degrees F (21 degrees C).

Service Temperature Limits: Minus 10 degrees to 200 degrees F (minus 23 to 93 degrees C).

Water Vapor Transmission: Not greater than 0.2173 perms per inch (8.555 perms/m) in accordance with ASTM E 96.

Flame Spread: Not greater than 5 in accordance with ASTM E 84.

Smoke Developed: Not greater than 0 in accordance with ASTM E 84.

Low to High Velocity Air Duct Sealant: RCD "#9 Mastic" non-toxic, water-based, fiber-reinforced adhesive-sealant; for permanently sealing fabricated joints and seams of sheet metal air ducts, UL 181 listed rigid fiberglass air ducts, UL 181 listed flexible air ducts, and thermal insulation; for repairing damaged and leaking air ducts; for sealing conditioned spaces from air infiltration.

Type: Elastomeric terpolymer emulsion.

Underwriters Laboratories Listed: UL-181A-M and UL-181B-M.

Solids by Weight: 70 percent, plus or minus 2 percent.

Weight per Gallon: 12.0 pounds, plus or minus 0.20 pounds (5.44 kg plus or minus 0.09 kg).

Wet Film Coverage: 100 linear feet per gallon at 1/16 inch by 3 inches wide (8.05 m/L at 1.58 x 75 mm).

Consistency: Thixotropic, non-sagging.

Adhesive Cure: 72 hours at 50 percent humidity and 70 degrees F (21 degrees C).

Service Temperature Limits: Zero degrees to 200 degrees F (minus 18 to 93 degrees C).

Water Vapor Transmission: Not greater than 0.6812 perms per inch (26.819 perms/m) in accordance with ASTM E 96.

Flame Spread: Not greater than 5.8 in accordance with ASTM E 84.

Smoke Developed: Not greater than 14.3 in accordance with ASTM E 84.

Reinforcing Membrane: RCD "Glasscoat" inorganic woven fiberglass reinforcing membrane; conforming to irregular surfaces for sealing and coating thermal insulation, air ducts, return air plenums, equipment, vessels, pipes, and fittings.

ASTM D 1668, Type III.

Nominal Dry Weight: 1.2 to 2.0 ounces per square yard (40.689 to 67.815 g/sq. m).

Saturated Weight: 1.6 to 2.6 ounces per square yard (54.252 to 88.160 g/sq. m).

Nominal Thread Count: 10 by 20.

Breaking Strength, Saturated: 75 warp, 75 fill

minimum.

PART EXECUTION

EXAMINATION

Examine surfaces to receive air duct sealants.

Notify Architect of conditions that would adversely affect application of sealants. Do not proceed with application until unsatisfactory conditions are corrected.

SURFACE PREPARATION

Prepare surfaces in accordance with manufacturer's instructions.

Remove water, dirt, oil, grease, and corrosion from surfaces to receive air duct sealants.

APPLICATION

Apply air duct sealants in accordance with manufacturer's instructions.

Apply to sheet metal air ducts, UL 181 listed rigid fiberglass air ducts, UL 181 listed flexible air ducts, thermal insulation, and other surfaces where indicated.

Do not thin or mix.

Apply tack coat at rate of 2 gallons per 100 square feet (0.815 L/sq. m).

Embed reinforcing membrane into tack coat.

Apply finish coat at rate of 2 gallons per 100 square feet (0.815 L/sq. m).

Allow drying time as follows:

Minimum 6 hours when used outdoors if wet weather is imminent.

Minimum 24 hours before using air duct system.

Additional time as required by air temperature and humidity conditions.

END OF SECTION