

Product Guide Specification

SECTION 15825 AIR DUCT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES

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

1.2 RELATED SECTIONS

- A. Section 15080 – Duct Insulation.
- B. Section 15810 – Ducts.
- C. Section 15820 – Duct Accessories.

1.3 REFERENCES

- A. ASTM D 1310 – Standard Test Method for Flash Point and Fire Point of Liquids by Tag Open-Cup Apparatus.
- B. ASTM D 1668 – Standard Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing.
- C. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. ASTM E 96 – Standard Test Methods for Water Vapor Transmission of Materials.
- E. ASTM D-6886 - Standard Test Method of Volatile Organic Compounds (VOC) in Low VOC Content Waterborne Air-Dry Coatings by Gas Chromatography
- F. UL 181 – Factory Made Air Ducts and Air Connectors.
- G. UL 181A – Closure Systems for Use with Rigid Air Ducts and Air Connectors.
- H. UL 181B – Closure Systems for Use with Flexible Air Ducts and Air Connectors.
- I. Green Topics: Energy: Heating, Cooling and Ventilation: HVAC Distribution Systems
- J. Green Topics: Indoor Environmental Quality: Indoor Pollution for Materials: Reduction of Indoor Pollutants
- K. Green Topics: Indoor Environmental Quality: Ventilation and Air Distribution: Management of Pressure Relationships
- L. 2009 LEED Credits:
 - 1) New Construction and Major Renovations
MR Credit 4: Recycled Content
EQ Prerequisite 1: Minimum IAQ Performance
EQ Credit 4.1: Low-Emitting Materials: Adhesives & Sealants
 - 2) Commercial Interiors
EA Credit 1.3: Optimize Energy Performance – HVAC
MR Credit 4: Recycled Content
IEQ Prerequisite 1; Minimum IAQ Performance
IEQ Credit 4.1: Low-Emitting Materials: Adhesives & Sealants

- 3) Healthcare
MR Credit 3: Sustainably Sourced Materials and Products
IEQ Prerequisite 1 Minimum Indoor Air Quality Performance
IEQ credit 4 Low-Emitting Materials
- 4) Homes
MR2: Environmentally Preferable Products 2.2
Core and Shell Development
MR Credit 4: Recycle Content
IEQ Prerequisite 1 Minimum Indoor Air Quality Performance
IEQ Credit 4.1 Low-Emitting Materials: Adhesives & Sealants
- 5) Schools New Construction and Major Renovations
MR Credit 4: Recycled Content
IEQ Prerequisite 1 Minimum Indoor Air Quality Performance
IEQ Credit 4: Low-Emitting Materials
- 6) Retail: New Construction and Major Renovations
MR Credit 4: Recycled Content
IEQ Prerequisite 1: Minimum Indoor Air Quality Performance
IEQ Credit 4: Low-Emitting Materials
- 7) Retail: Commercial Interiors
EA Credit 1.3: Optimize Energy Performance – HVAC
MR Credit 4: Recycled Content
IEQ Prerequisite 1: Minimum Indoor Air Quality Performance
IEQ Credit 4:1 Low-Emitting Materials – Adhesive & Sealants

1.4 SUBMITTALS

- A. Comply with Section 01330 – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including physical properties, surface preparation, and application instructions.
- C. Warranty: Submit manufacturer's standard warranty.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
 - 1. Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
 - 2. Storage Temperature: 45° F. to 90° F.
 - 3. Protect from freezing.
- C. Handling: Protect materials during handling and application to prevent contamination or damage.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply below 40° F. or above 125° F.

PART 2 PRODUCTS

2.1 MANUFACTURER View RCD Corporation's Product Brochure: <http://rcdmastics.com/images/stories/pdf/rcd-products2010.pdf>

- A. RCD Corporation®, 2850 Dillard Road, Eustis, Florida 32726.
voice: (352) 589-0099; website: <http://rcdmastics.com/>; email: info@rcdcorp.com

2.2 AIR DUCT SEALANTS

- A. Low to High Velocity Air Duct Sealant: RCD Corporation® #8 Mastic®
<http://rcdmastics.com/8-mastic-sheet-metal-duct-sealant.html>

1. Description: Water-borne sealant for permanently sealing fabricated joints and seams of thermal insulation and all air duct types including UL 181 Listed air ducts. #8 Mastic® is specifically formulated for high velocity sheet metal air ducts.
2. Type: Elastomeric terpolymer emulsion.
3. UL Listed: UL 181A-M and UL 181B-M: 28DF.
4. Solids by Weight: 74%, plus or minus 2%.
5. Weight per Gallon: 12.1 lbs., plus or minus 0.30 pounds.
6. Wet Film Coverage: 125 lineal ft./gallon at 50 mils thickness by 3 inches wide.
7. Consistency: Thixotropic, non-sagging paste.
8. Cure to: 4 lbs./inch tensile joint strength at 50% relative humidity and 75° F.: 5 hours.
9. Service Temperature Limits: -10° F. to 200° F.
10. Water Vapor Transmission, ASTM E-96: 0.65 perms.
11. SMACNA Pressure Class: 0.5 to 10 inches water gauge.
12. SMACNA Seal Classes: A, B, and C.
13. Flash Point, Tag Open Cup, ASTM D-1310: None.
14. Volatile Organic Compounds (VOC), ASTM D-6886: Less than 50 grams/liter.
15. 2009 LEED Credits: See Reference L. 2009 LEED Credits

2.3 ACCESSORIES

- A. Reinforcing Membrane (fiberglass mesh) to reinforce joints and seams: RCD Corporation® Glasscoat®.
1. Description: Inorganic fiberglass mesh, with pressure-sensitive adhesive on one side.
 2. Compliance: ASTM D-1668, Type III.
 3. Nominal Dry Weight: 1.6 to 2.0 ounces per square yard.
 4. Thickness: 7 to 8 mils.
 5. Width: 3 inches.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive air duct sealants.
- B. Notify Architect of conditions that would adversely affect application.
- C. Do not begin surface preparation or application until unacceptable conditions are corrected.

3.2 SURFACE PREPARATION

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Remove corrosion, dirt, dust, grease, loose or chalking paint, mold, mildew, oil, scale, silicone and water from surfaces to receive air duct sealants.

3.3 APPLICATION

- A. Apply air duct sealants to sheet metal air ducts, UL 181-listed rigid fiberglass air ducts, UL 181-listed flexible air ducts, thermal insulation, and other surfaces in accordance with manufacturer's instructions. Do not apply below 38° F.
- B. Do not dilute or mix sealants.
- C. Apply tack coat of 25 mils wet thickness.
- D. If reinforcing membrane is used, embed into tack coat.
- E. Apply finish coat of 25 mils wet thickness.
- F. Drying Time:
 - 1. Allow minimum of 6 hours drying time when used outdoors, if wet weather is imminent.
 - 2. Allow minimum of 20 hours drying time before using air duct system.
 - 3. Allow additional drying time as required by air temperature and humidity conditions.

3.4 PROTECTION

- A. Protect applied air duct sealants from damage during construction.

END OF SECTION

<http://rcdmastics.com/>