ICC EVALUATION SERVICE®

ICC-ES Evaluation Report

ESR-5115

Effective Date: June 2023

This listing is subject to re-examination in one year.

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DIVISION: 23 00 00 — HEATING VENTILATING, AND AIR CONDITIONNING (HVAC)
Section: 23 31 00— HVAC Ducts and Casing

REPORT HOLDER:

AEROSEAL, LLC
www.aeroseal.com

EVALUATION SUBJECT:

AEROSEAL DUCTSEAL AND DUCTSEAL LT

1.0 EVALUATION SCOPE

Compliance with the following codes:

2021, 2018, 2015 and 2012 *International Mechanical Code®* (IMC)

2021, 2018, 2015 and 2012 *International Residential Code®* (IRC)

2021, 2018, 2015 and 2012 *International Building Code®* (IBC)

2021, 2018, 2015 and 2012 *Uniform Mechanical Code®* (UMC*)

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Property evaluated:

Duct Sealant

2.0 USES

Aeroseal DuctSeal and DuctSeal LT are sealants for use with sheet metal or flexible air ducts that are fabricated and installed in accordance with ANSI/SMACNA HVAC Duct Construction Standards – Metal and Flexible.

Aeroseal duct sealants are used for the purpose of additional sealing of seams and joints of sheet metal or flexible air duct systems. These requirements are limited to application in ducts with individual openings no greater than 5/8 in. diameter, and seam / joint openings no greater than 5/8 in. across and for installation in accordance with Section 603.9 of the International Mechanical Code, Section 603.10 of the Uniform Mechanical Code, Section 717 of the International Building Code, and Section M1601.4.1 of the International Residential Code.

3.0 DESCRIPTION

3.1 General:

Aeroseal DuctSeal and DuctSeal LT are a stable, non-toxic, non-flammable emulsion of water and vinyl acetate polymer that is Aerosealized into 4-10 micron-sized particles and distributed under pressure throughout the inside of the duct system. The particles deposit only at the leak sites and build to form a tenacious and tight air seal, remaining firmly in place for years while staying completely pliable and flexible.

3.2 Ratings:

Aeroseal DuctSeal and DuctSeal LT when installed within a duct system were verified to have achieved a Seal Class A in accordance with the SMACNA HVAC Air Duct Leakage Test Manual. The caulking and sealants have a flame spread index of no more than 25 and a smoke development index of less 50 when tested in accordance with ASTM E84 and UL 723.

3.3 Performance Characteristics:

The sealants were found to comply with UL 1381 which include the following requirements to address performance characteristics of the sprayed sealant relative to not adversely affecting the sheet metal ducts to which they are applied:

- Mold Growth and Humidity Test
- Erosion Test
- Burning Test (continue to burn progressively)
- Leakage Reduction and Durability Test (ASTM E2342)

Joints have been evaluated to meet the sealing requirements in Section 603.9 of the International Mechanical Code, Section 603.10 of the Uniform Mechanical Code, and Section M1601.4.1 of the International Residential Code.

4.0 INSTALLATION

4.1 General:

Aeroseal DuctSeal and DuctSeal LT are to be applied by trained professionals and specifically in accordance with the manufacturer's installation instructions and applicable codes.

4.2 Building occupants:

Building occupants should stay outside of the general area during the installation and up to 2 hours afterwards. This is a precaution to minimize exposure to Aeroseal particles, not because the duct sealant is toxic.

4.3 Installers:

Installers should use personal protective equipment (PPE) during application when they are working in close proximity (e.g., within 5 feet) of the ductwork and be prepared at all times during application to use PPE to protect against Aeroseal particle exposure during fogging incidents. The options for PPE for fine particles are (1) NIOSH-approved half-face filtering face piece (dust mask), and (2) NIOSH-approved half face air-purifying tight-fitting face piece equipped with N-95 filters.

5.0 CONDITIONS OF USE

Aeroseal DuctSeal and DuctSeal LT described in this report comply with, or are suitable alternatives to what is specified in, the code listed in Section 1.0 of this report, subject to the following conditions:

5.1 Aeroseal DuctSeal and DuctSeal LT must be manufactured, identified and installed in accordance with this report, the manufacturer's published installation instructions, and Chapter 16 of the IRC or Chapter 6 of the IMC or UMC, whichever is applicable. In the event of conflict between the manufacturer's instructions and this report, this report governs.

5.2 This report is not intended to address or rate the sealing efficacy of the duct sprayed sealant or human health effects of the Aeroseal duct sealants.

5.3 Aeroseal DuctSeal and DuctSeal LT are manufactured under a quality control program with annual inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with UL 1381, Outline of Investigation for Aerosol Duct Spray Sealant, dated August 27, 2013

7.0 IDENTIFICATION

7.1 The container of sealant shall be permanent marked, by means such as printing or stenciling with waterproof ink or paint on the surface of the sealant container or on labels not affected by water, and shall be attached to the material by means of water-insoluble adhesive capable of being used with the following:

- Manufacturer's name or trademark
- Distinctive type designation
- The date of manufacture
- Minimum set time
- ICC-ES PMG mark of conformity

The container of sealant shall additionally be marked with the following statements:

- "(Product designation) Aeroseal duct sealant shall be applied using (specific name and model) spray equipment in strict accordance with the accompanying manufacturer's installation instructions"
- "For use with sheet metal or flexible ducts only"
- "Do not operate the duct system for 30 minutes after spraying"
- "For use with ducts having an air velocity not exceeding 6,000 fpm"

7.2 The report holder's contact information is

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