

FlameChek™ Duct Wrap Insulation

1. PRODUCT NAME

FlameChek™ Duct Wrap Insulation

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

Basic Use: FlameChek Duct Wrap Insulation is a 1 1/2" thick non-ceramic, glass fiber, high-temperature insulation blanket designed to be an easily installed double layer system for grease duct applications requiring a one-hour or two-hour rating.

This product is:

- Flexible
 - Simple to wrap around ducts
 - Encapsulated with a flame-resistant scrim specifically designed to survive the rigors of installation.
- In addition, FlameChek:
- Saves critical building space in commercial and industrial applications.
 - Allows for zero clearance from the duct insulation to the interior surfaces of noncombustible and limited combustible construction.
 - Provides superior thermal and mechanical properties.
 - Simplifies field installation.

FlameChek can be used in many commercial and industrial passive fire protection applications such as kitchen exhaust grease ducts in restaurants, stadiums, hospitals, prisons and other facilities with commercial cooking operations.

Composition and Materials: High-temperature glass-fibers created from a calcium, magnesium and silica chem-

istry, combined with a proprietary fiber spinning technology, produce a specialty high-temperature, completely inorganic glass fiber blanket. FlameChek Duct Insulation is fully encapsulated in a glass scrim reinforced aluminum foil facing.

Sizes: FlameChek Duct Insulation is 1.5" thick and available as 2' or 4' wide, 25' long rolls.

4. TECHNICAL DATA

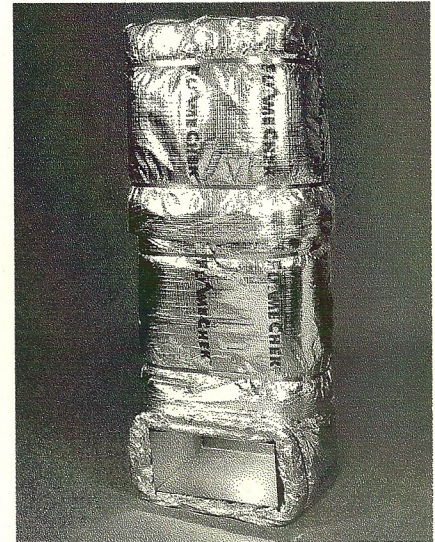
Applicable Standards: Underwriters Laboratories (UL) classified, zero clearance, two-hour fire-rated grease duct enclosure system. Meets National Fire Protection Association (NFPA) 96 requirements which allow for zero clearance from the duct insulation to the interior surfaces of enclosures of noncombustible and limited combustible construction.

Fire Resistance: Two layers (3" thickness) of FlameChek Duct Wrap Insulation are required to achieve a two-hour rating.

- Internal Grease Duct Fire test (zero clearance, 2000° F) according to UL 1978 with 3" FlameChek Duct Insulation.
- Grease Duct Through Penetration according to UL 1479 and Firestop Test (see UL System No. C-AJ-7032) according to ASTM E 119; F Rating = 3 Hours, T Rating = 3.
- External Duct Fire Test, Fire Rating Enclosure Tested in accordance with UL 263, ASTM E 119 and 2-hour fire ratings with 3" FlameChek Duct Wrap Insulation.
- Surface Burning Characteristics: (UL 23, ASTM E 84)
 - Max. Flame Spread Index; 25
 - Max. Smoke Developed Index; 50

5. INSTALLATION

FlameChek Duct Wrap Insulation has



been designed to simplify field installation. The system consists of two 1.5" layers of FlameChek Duct Insulation (3" total thickness) applied directly to the duct surface. A 3" longitudinal and perimeter overlap is employed to eliminate potential seams for fire penetration. (See Figure 1 for Installation details. See Figure 2 for Through-Penetration details.)

Until the FlameChek Duct Wrap Insulation is permanently secured with stainless steel bands, filament tape is used to temporarily hold the interior and exterior layers in place during installation. Insulation pins are recommended for duct spans greater than 24". Pins should be attached to the bottom of the horizontal duct surface and on vertical duct runs to prevent sagging of the material.

Required Materials (see Figure 2)

1. Floor or Wall Assembly – Min. 4.5" thick concrete floor or min. 5.5" concrete or block wall.
2. Through Penetrant – 16 gauge or heavier steel duct.
3. Fire Protection System consisting of:
 - a. Wrap Materials – Two layers of 1.5" thick FlameChek Duct Insulation. Seal all cut edges of FlameChek Duct Insulation with 4" wide pressure-sensitive aluminum foil tape.

Wrap the steel duct with two (2) layers of FlameChek Duct Insulation. Cut each layer to size and tightly wrap directly around duct with a minimum perimeter overlap of 3". Stagger perimeter joints of outer layer of FlameChek Duct Insulation from the perimeter joints of inner layer of FlameChek Duct Insulation. Overlap longitudinal joints min. 3". Offset the longitudinal joint of outer layer about 10.5" from longitudinal joints of inner layer. Temporarily secure each piece of FlameChek Duct Insulation with 1" wide filament tape spaced max. 12" OC (10.5" OC recommended). Annular space of 0.75" to 1.25" between insulated duct and periphery of opening.

- b. Steel Banding Straps – 0.5" wide by 0.015" thick Type SS 302 banding straps and 0.5" wide by 1" long Type SS 302 crimp clips. Straps max. spacing is 12" OC (10.5" recommended). At least three steel banding straps per 24" wide blanket.
- c. Stainless Steel Mesh – Min. 0.011" thick Type SS 304 mesh tightly wrapped around face layer of FlameChek Duct Insulation with min. 1" perimeter overlap. Extend mesh min. 4" beyond floor or wall. Temporarily secure with 24 gauge steel wire ties positioned 2" from top and bottom of mesh. Secure mesh with SS worm drive banding and hose clamps (item 3D) on 4" centers, and locate at top and bottom plane of slab.
- d. Steel Banding and Clamps – 0.5" wide by 0.030" thick Type SS 430 worm drive banding and hose clamps.
- e. Forming Materials – Min. 3.5" thick FlameChek Fiber Blanket firmly packed in opening to fill annular space between FlameChek Duct Insulation surface and periphery of opening. Annular space should be 1.25" to 1.75" after packing. FlameChek blanket to be recessed from top of floor or from both surfaces of wall as required to accommodate Firestop Putty.
- f. Fill, Void or Cavity Material – Firestop Putty – Min. 1" thick applied within the annular space, flush with top surface of floor and with both surfaces of wall. Install additional Firestop Putty so a min. 0.5" crown is formed around

wrapped duct and lapping 0.5" beyond periphery of opening. Refer to the CertainTeed FlameChek Installation Manual (30-31-102).

6. AVAILABILITY AND COST

Distributed and sold throughout the United States and Canada. For availability and cost, contact your local distributor, or call CertainTeed in Valley Forge, PA, at (800) 233-8990.

7. WARRANTY

Inasmuch as CertainTeed has no control over the installation design, installation workmanship, accessory materials, or conditions of application, CertainTeed does not warrant the performance or results of any installation containing their products.

8. MAINTENANCE

No maintenance required.

9. TECHNICAL SERVICES

Technical assistance can be obtained either from the local CertainTeed sales representative, or by calling CertainTeed in Valley Forge, PA, (800) 233-8990.

10. FILING SYSTEMS

Additional product information is available upon request.

Visit us on our website at www.certainteed.com for the most up-to-date product information.

Figure 1: FlameChek™ Duct Insulation System – Installation

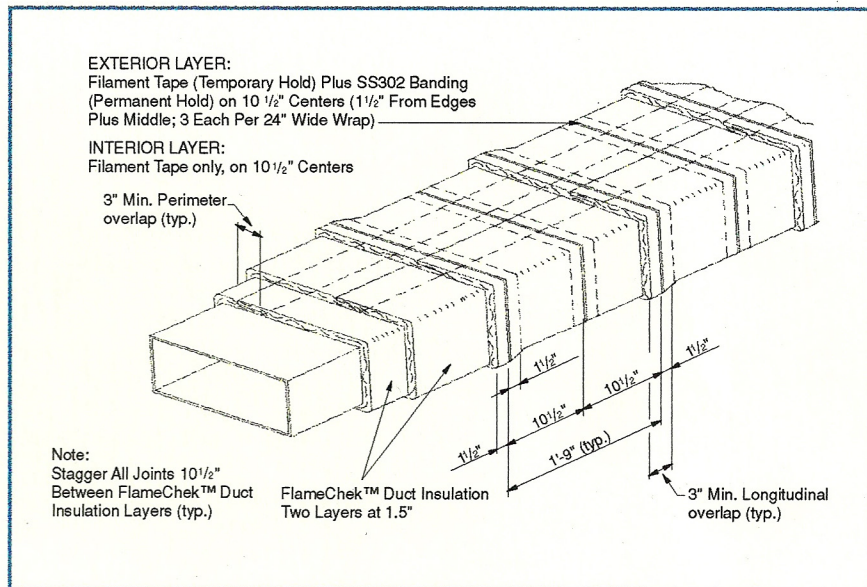


Figure 2: Through-Penetration Detail

