

## Black Duct Board

**Basic Use:** Black Duct Board is a rigid board designed for fabrication into supply and return air HVAC duct work. The product can be used in heating and cooling systems which operate at velocities up to 5,000 fpm (25.4 m/s), temperatures up to 250°F (121°C) and maximum internal pressures of  $\pm 2"$  (51mm) water gauge.



**Benefits:** This product is strong, resistant to mold, bacteria and microbial growth, and easy to clean. In addition, provides excellent thermal properties, absorbs unwanted crosstalk, equipment and air rush noise, and exhibits low air flow resistance. It also meets all applicable fire resistance standards and building code requirements. The product can be precision cut using both manual and automatic cutting equipment.

**Composition and Materials:** Composed of resin bonded glass fibers with a reinforced foil laminate air barrier/vapor retarder facing applied to the outside surface and a fiber glass textile mat bonded to the air stream surface. The airstream surface contains an EPA-registered antimicrobial agent in order to reduce the potential of microbial growth that may affect this product. The antimicrobial properties are intended to protect only this product.

**Limitations:** Not to be used under poured concrete slabs or to convey exhaust fumes, solids or corrosive gases. Ducts exposed to the weather must be weather protected and reinforced per industry standards. Ducts must not be used as vertical risers more than two stories in height. They must not be used adjacent to high-temperature heating coils. Insulation should be kept clean and dry during shipping, storage and system operation.

### Installation

Must be fabricated and installed in accordance with the NAIMA or SMACNA Fibrous Glass Duct Construction Standards and all closure systems must meet the requirements of UL 181A. The installed duct system should be purged prior to occupancy to remove any loose material.

### Technical Data

#### Applicable Standards

- Model Building Codes:
  - ICC
- Material Standards: UL 181
  - Class 1 Rigid Air Duct
- Fire Safety Standards:
  - NFPA 90A, NFPA 90B

#### Fire Resistance

- Surface Burning Characteristics: UL 723 and ASTM E84
  - Max. Flame Spread Index: 25
  - Max. Smoke Developed Index: 50
- Limited Combustible: NFPA 259 <3,500 Btu/lb.

#### Physical/Chemical Properties

- Thermal Performance:
  - See table on other side
- Acoustical Performance:
  - See table on other side
- Operating Limits:
  - Temperature: ASTM C411 Max. 250°F (121°C)
  - Air Velocity: UL 181 Max. 5,000 fpm (25.4 m/s)
  - Pressure  $\pm 2"$  wc (498 Pa)
  - Ambient Temperature 150°F (66°C)
- Water Vapor Sorption: ASTM C1104 < 2% by weight
- Water Vapor Transmission (Facing):
  - ASTM E96, Desiccant Method Max. 0.02 perms 1.15 x 10<sup>-9</sup>g/Pa•s•m<sup>2</sup>
- Air Leakage Class: SMACNA
  - Class 6
- Corrosiveness: ASTM C665
  - Pass test requirements
- Bacteria Resistance: ASTM G22
  - No growth
- Fungi Resistance: ASTM C138 and ASTM G21
  - Pass test requirements; no growth