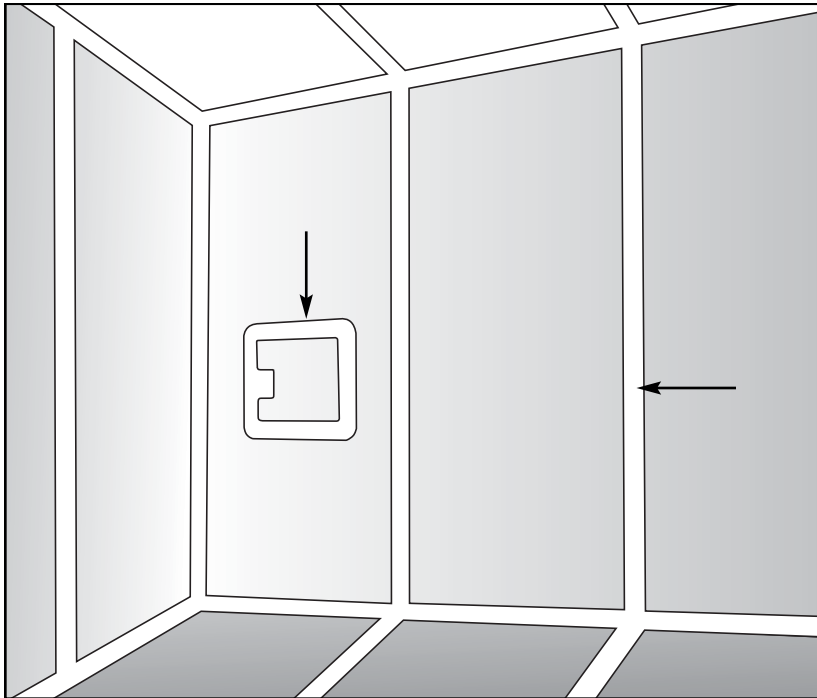


# 3M Application Profile

**Market:** Electronics

**Application Description:** EMI/RFI shielding of seams and apertures.



## Key Application Requirements

Effective, economical shielding of seams and apertures in many shielded rooms. (First determine if a moderate level of shielding will work and if roll goods or die-cuts are preferred.)

**EMI = Electromagnetic Interference:** Any undesired disturbance, either radiated or conducted, that degrades the proper operations of electrical or electronic equipment. EMI occurs when the operating frequency of one device overlaps that of another. Shields, like metals or metal foil tapes, block radiated energy and keep signals either inside or out.

**RFI = Radio Frequency Interference:** EMI that occurs in those frequency bands occupied by the majority of radio and other communication signals.

## Benefits/Advantages To Customer

*Application:* Lined tapes are faster and easier to apply than many other typical shielding materials.

*Die-cuts:* Lined tapes allow precise die-cuts for difficult shielding operations.

*Aluminum foil backing:* Durable, chemically resistant, electrically conductive backing provides shielding for electrical interference.

*Acrylic adhesive:* A long-life permanent adhesive.

*EMI/RFI shielding:* These tapes provide a moderate (25 db at 100 MHz) shielding effectiveness.

## PRODUCT

3M™ Aluminum Foil Tapes 425 and 431 (Lined)

3M™ Aluminum Foil Tapes 427 and 439 (Non-lined)

## Process

Tape is applied over seams, connectors, cabinet hooks, etc., in a conventional manner by hand or with special equipment. Tape needs to be rubbed down and the aluminum backing needs to be in electrical contact with the applications ground plane system. Die-cut parts can also be fabricated.

## Additional Product Information

3M™ Aluminum Foil Tape 425: 3 mil. The shielding effectiveness increases to 47 db at 1,000 MHz.

3M™ Aluminum Foil Tape 427: 3 mil, lined. The shielding effectiveness increases to 47 db at 1,000 MHz.

3M™ Aluminum Foil Tape 431: 2 mil.

3M™ Aluminum Foil Tape 439: 2 mil, lined.

## SIC Code

3571 — Electronic Computers

3577 — Computer Peripheral Equipment

3600 — Electronic and other Electrical Equipment and Components

## Key Decision Makers

Design Engineers

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## For Additional Information

To request additional product information or to arrange for sales assistance, call 1-800-362-3550. Address correspondence to: 3M Industrial Business Customer Response Center, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55106. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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## Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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### Industrial Business

Building 21-1W-10, 900 Bush Avenue  
St. Paul, MN 55106

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