

# Adhesive Mats



Valutek's multi-layered low-density polyethylene adhesive mats are designed to effectively capture dirt and dust from foot traffic and equipment wheels before they enter a cleanroom or controlled environment. Each removable layer of the Valutek adhesive mats features a specially developed adhesive coating that provides an efficient means of reducing contamination by trapping and preventing the transfer of particles.

## Application

Valutek offers mats suitable for MacroTek, MicroTek, and NanoTek applications. These mats are ideal for a wide range of applications, including entrances to cleanrooms, gowning rooms, laboratories, or workstations that require high levels of contamination control. Adhesive mats are extensively used in various industries, such as semiconductor, biotechnology, medical device, pharmaceutical, aerospace, automotive, and construction.

Part Number: VTXXX/4P30L-B/W/G

## Storage and Environmental Conditions

### Correct Storage Orientation

Valutek adhesive mats should be stored horizontally and stacked carefully to prevent damage. Storing them vertically or with heavy objects on top may cause the mats to become damaged or distorted. Signs of damage include the presence of bubbles and veins between the mat layers. Such imperfections can lead to an uneven surface, resulting in the mat peeling away from the floor and a decrease in its performance.

### Storage and Product Shelf Life

When stored improperly—such as vertical placement or outside of a climate-controlled environment—adhesive performance can degrade rapidly. The shelf life of the adhesive strength specified below may diminish from years to just months due to incorrect storage. Valutek is not responsible for improper storage once a product leaves our manufacturing and storage facilities.

### Environmental Conditions

Care and consideration must be given to the environmental storage conditions of adhesive mats. Valutek mats employ a water-based adhesive, which can be compromised by extreme temperatures. Exposure to extreme cold can harden the adhesive, rendering it ineffective. While short-term exposure to cold will not cause permanent damage, the mat must be allowed to re-equilibrate or 'warm up' to a minimum of 32°F (0°C) before installation and use. On the other hand, exposure to extreme heat can cause the adhesive to break down, leading to irreversible damage to the mat at temperatures exceeding 105°F (40.5°C).

### Product Performance

To ensure optimal performance of Valutek adhesive mats, it is important to change the mat layers at a frequency determined by several factors: the number of operators, the number of "passes" (defined as one person walking across the mat one time, with each foot making full contact with the mat once), the class of the environment, and the quantity of particles captured. Valutek recommends changing a mat layer after every 50 passes.



Gloves



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Apparel



Adhesive Mats



Cleaning & Maintenance



Documentation



Glove Liners



ESD

## Valutek Adhesive Mats

Part Number: VTXXX/4P30L-B/W/G



## Mat Physical Properties

| Attribute                      | Value (Metric Units)  |
|--------------------------------|-----------------------|
| Adhesive                       | Acrylic (Water Based) |
| <b>Film Thickness</b>          |                       |
| First Cover Sheet (clear)      | 0.04 mm $\pm$ 0.004mm |
| Disposable Sheet (colored)     | 0.04 $\pm$ 0.003 mm   |
| Bottom Cover Sheet (clear)     | 0.04 $\pm$ 0.004 mm   |
| <b>Adhesive Strength</b>       |                       |
| Active Layer Adhesive Strength | 400 $\pm$ 50 g/25mm   |
| Mat Backing Adhesive Strength  | 600 $\pm$ 50 g/25mm   |
| <b>Tensile Strength</b>        |                       |
| Horizontal                     | > 10 Mpa              |
| Vertical                       | > 8 Mpa               |
| <b>Elongation</b>              |                       |
| Horizontal                     | > 150%                |
| Vertical                       | > 200%                |
| <b>Heat Resistance</b>         |                       |
|                                | 60°C/48 Hours         |
| <b>Cold Resistance</b>         |                       |
|                                | -13°C/48 Hours        |

## Sizes, Colors and Packaging

| Available Sizes | Standard Color  | Special Order Color | Packaging                      |
|-----------------|-----------------|---------------------|--------------------------------|
| 18" x 36"       | White/Blue      | Grey                | 30 sheets / mat, 4 mats / case |
| 18" x 45"       | White           | Grey/Blue           | 30 sheets / mat, 4 mats / case |
| 24" x 36"       | White/Blue      | Grey                | 30 sheets / mat, 4 mats / case |
| 26" x 45"       | White/Blue/Grey | -                   | 30 sheets / mat, 4 mats / case |
| 36" x 36"       | White           | Grey/Blue           | 30 sheets / mat, 4 mats / case |
| 36" x 45"       | White/Blue      | Grey                | 30 sheets / mat, 4 mats / case |
| 36" x 60"       | White/Blue      | Grey                | 30 sheets / mat, 4 mats / case |
| 36" x 72"       | White/Blue      | -                   | 30 sheets / mat, 4 mats / case |



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