## **Adhesive Mats**









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

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.

## **Storage and Environmental Conditons**

#### **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.

#### **Product Shelf Life**

Under appropriate environmental storage conditions, Valutek adhesive mats will maintain high performance for up to 6 months from the manufacture date. After this period, the adhesion performance of the mats will gradually diminish over time.

#### **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.

















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## **Mat Physical Properties**

Atribute	Value (Metric Units)	
Adhesive	Acrylic (Water Based)	
Film Thickness		
First Cover Sheet (clear)	$0.04  \text{mm} \pm 0.004  \text{mm}$	
Disposable Sheet (colored)	$0.04 \pm 0.003  \text{mm}$	
Botom Cover Sheet (clear)	$0.04 \pm 0.004  \text{mm}$	
Adhesive Strength		
Active Layer Adhesive Strength	$300 \pm 25 \text{ g/}25\text{mm}$	
Mat Backing Adhesive Strength	$500 \pm 50 \text{ g/}25\text{mm}$	
Tensile Strength		
Horizontal	> 10 Mpa	
Vertical	> 8 Mpa	
Elongation	'	
Horizontal	> 150%	
Vertical	> 200%	
Heat Resistance	60°C/48 Hours	
Cold Resistance	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







