

Mat Protocol for Cleanroom Use

The use of multi-layer adhesive matting for cleanrooms is almost universal. However, how the matting is used is unique to each cleanroom. Matting can vary in size, color, placement, and number based on the characteristics and logistics of each individual cleanroom.

Placement

Matting should be placed in an area where it will be on clean, hard flooring. It should be placed just before or just after the ingress/ egress point for each cleanliness or control change. It is suggested that the placement sites are worked backward from the final clean area or cleanroom.

- ✓ cleanroom-gowning area
- ✓ cleanroom-staging area
- ✓ gowning area-control area
- ✓ control area –common hallway
- ✓ common hallway-public area
- ✓ common hallway- warehouse or receiving

Mats should be placed so that all those passing through that point must step on the mats. The mats should be placed with the longer dimension of the mat in the same direction as the traffic flow for maximum footfalls on each mat. The minimum number of footfalls should be two with each foot for each location.

Size

The proper size mat for each area of placement is dependent on the width of the opening and the direction and variance of the traffic. Normally the width of the mat should be 2/3rds to 3/4ths of the width of the doorway. It does not normally need to cover the full width because normal traffic, when approaching from the perpendicular direction, passes through the middle of the doorway and not along the edge.

However, if the traffic enters from the side of the entry way or at a sharp angle, then the width of the mat needs to be wider than the doorway to allow for enough footfalls.

The length of the mat should be long enough to provide two footfalls with each foot at each location. Usually this is a minimum of the standard 45”.

Color

The color of the mats can vary from the standard white, blue and grey to custom colors and printed messages. The color has no effect on the function of the mat. In general, the white color shows the most dirt and particulates, and is preferred by most users to make sure the layers are changed at frequent enough intervals. However, blue and grey work just as well when a maintenance schedule is set.

Layer Maintenance

How often the layers should be removed depends on numerous variables:

- ✓ How dirty is the area the personnel are coming from?
- ✓ The difference in cleanliness between the areas.
- ✓ The number of people or pairs of feet per shift or per hour.
- ✓ The size of the mats and how many mats or locations are in the series.

In general, areas farther away from the cleanroom will be dirtier. Changing the layers at this point of use every ½ hour would be a benchmark to start with. The final entry area into the cleanroom is probably from a clean area to a very clean area and each layer may last 4 to 8 hours.

However, this is just a rough starting point and each point of use will vary greatly. A few days of use and observation will help to determine the optimal mat layer change interval.

Installation

1. Before placing a new mat down or replacing an existing mat, thoroughly clean the surface to remove contamination that may act as a barrier and keep the mat from adhering. If you are replacing an existing mat make sure to remove any adhesive residue. We recommend using a pre-saturated wiper that contains a percentage of isopropyl alcohol. Make sure the surface is completely dry before application.

2. To apply the mat, remove half of the release liner in the long direction of the mat. This will help with the alignment of the mat.

3. Once you have the mat in the location you want and it is properly aligned, start smoothing out the half of the mat with the adhesive exposed. Start at one end and work toward the middle making sure you do not trap air under the mat as you go, then remove the rest of the release liner and smooth the rest of the mat out in the same direction in which you removed the release liner.

Storage

Mats should be stored flat and for several hours in similar climate conditions as the point of use. The mats should be used in a controlled environment setting for ideal results but may be placed in any area that has a temperature of 12-35 C (54-95 F).

Long-term storage of product should always be on a hard, flat, and solid surface. Storage on the original shipping pallet is recommended.

Normal warehouse conditions are usually acceptable but extreme temperatures (less than 0 or greater than 40 C / 32 or 105 F) should be avoided.

Storage of product in excess of one year from date of purchase is not recommended. However, under normal storage conditions, the product will not have any variation in performance for a period of up to three years.