



Atmospheric Mat

P1-2010

ASSEMBLY:

Place the mat flat on a table with the screw heads facing up. Screw the hook into the center of the mat. Be sure that the end of the hook does not protrude beyond the opposite side of the metal washer.

Store flat. Folds and curves in the rubber will cause the mat to buckle and not hold tight. The hook may be easily removed for convenient storage.

INSTRUCTIONS:

Place the mat down on a smooth, flat surface. Pick it up by its edge. Easy, right? Put it down again and lift it by the hook. Can't do it, can you? It's like the mat is glued down! Release the hook, and lift it by the edge again to show that it is not stuck at all.

Place the mat on a flat-topped lab stool, and you can lift the stool!

HOW IT WORKS:

The mat is held down by atmospheric pressure, which is approximately 15 pounds per square inch. A quick calculation leads to a total pressure of over 1500 lbs on the mat (assuming no air at all is under the mat). Now, you probably don't have to pull with 1500 lbs of force to lift the mat. Imperfections in the rubber can lead to bumps and leaks, breaking the seal.

The Atmospheric Mat is unique in that you don't need to apply any force to make it work. (Suction cups, for example, also stay put because of atmospheric pressure, but the way they are applied may make it seem like they adhere to the surface, rather than being pushed there from outside.)

RELATED PRODUCTS:

Atmospheric Pressure Cups (P1-2010). Push these rubber cups together and then try to pull them apart.

Gas Laws and Pressure Discovery Pack (P1-2070).

