Porous Metal for Mold Vents

Application: Venting is a means of allowing escape or passage of vapor, heat, gas, or liquid from a restricted area. Mott's porous metal material has been used in mold vent applications by many plastic, rubber and metal molders for over 50 years.

The need to vent molds has been recognized as a means to avoid the adverse effects of entrapped or evolved gases. Sources of these gases include heated air in the mold, steam generation from water in binders, and products of combustion from binders and coatings.

Mott Product Description/Solution:

Typical porous metal parts used in mold vent applications range in diameters from 0.125" up to 0.500" and have a thickness range of 0.062" or 0.125" or greater. As the plastic or metal is introduced into the mold cavity, gases are vented out through the sintered porous metal part.

Mott Media Grades typically used for mold vents include 5, 10, 20 and/or 40. The choice of the Media Grade depends on the viscosity of the material being molded, the molding pressure, and how quick the mold needs to be vented and residual pattern requirement. When the molding material comes in contact with the surface of the porous metal vent, it may be extruded or drawn into the porous media. A thin molding material will tend to enter the porous media easier than a thick molding material. The coarser grades of porous media (with their larger mean pore sizes) offer less resistance to the molding material, but faster venting than the finer grades.

Sometimes the Media Grade of the porous is determined by the pattern or lack of pattern the Media Grade may impart on the molded surface. The finer Media Grade tends to leave no or very little residual pattern compared to the coarser grades. Determination of the proper Media Grades may require some trial and error to optimize the parameters and benefits of the mold vents.

Mott’s porous metal products come in a wide variety of alloys, porosities, and configurations. Send us your specifications and we can assist you in finding the correct solution for your application requirements. In certain cases, product samples may be available for your own testing.

If you have any questions regarding your specific requirements and the application of Mott porous metal products, please contact us at Quest@mottcorp.com and request Technical Assistance. Our Applications Engineers will contact you to answer any questions and provide you with the information you need.