

HENNECKE PRESS RELEASE

Flexible from 8 to 100 ppi

Slabstock manufacturers need to be highly flexible in designing their production process to be able to meet the customers' diverse requirements in terms of quality and foam cell size. Hennecke provides them with the necessary technology for this purpose.

Depending on the application, the many different foams on the market are classified into three major groups.

First group: Foam products based on ether for use in the furniture and mattresses sector; the distinctive features are density and hardness. Second group: Foam products based on ether and ester for high-quality applications. Besides density and hardness, pinhole-free cell structure is a key criterion.

Third group: Ether and ester foams especially for technical applications. The distinctive feature as well as the application specification for this group is the measuring unit "ppi" (pores per inch) or "cells per centimetre". This rule might not find uniform application but is frequently used in practice.

Ether and ester foams with 8 to 100 ppi are used, for example, as aquarium filters (only ether) and as supporting structures in the production of ceramic filters. Foams with 45 ppi are suitable, inter alia, for producing filters for air conditioning systems. The use of foams with 80 to 100 ppi is recommended, for instance, for paint rollers, polishing wheels, printer cartridges and ink pads.

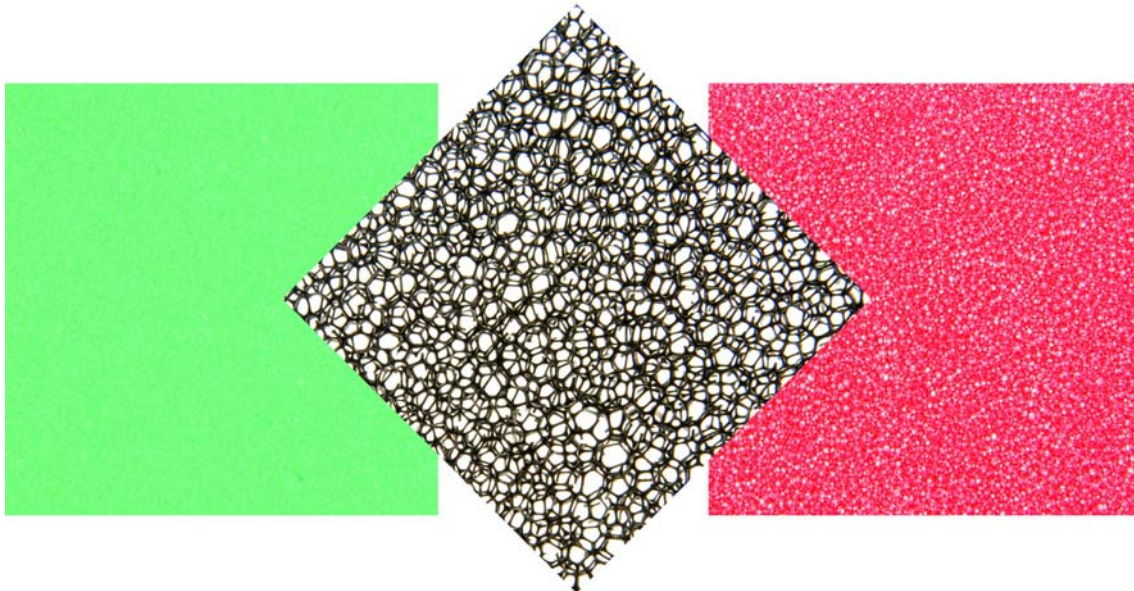
For these and many other applications Hennecke offers slabstock manufacturers a highly flexible and efficient technology. The key element consists in a mixer unit with high-pressure injection of isocyanate and additives as well as a mechanical stirrer.

By adjusting the parameters for the isocyanate injection pressure, the mixing chamber pressure and the stirrer speed, the operator can control the pore structure - in addition to the chemical formulation - from fine to coarse during ongoing production. This requires extensive know-how on how the adjustment of the mentioned parameters can influence and control the nucleation process (cell formation), since there are other conditions as well, such as temperature or gas content of the added components, which affect the process. Exact knowledge about the interdependence of the different factors during nucleation is **the** prerequisite for achieving reproducible foam qualities.

Depending on the type of foam, formulation and plant configuration, cell sizes between 8 and 100 ppi can be set. In practice, this means that operators are able to manufacture foams for a great variety of applications on one and the same plant and in a profitable and reproducible manner - including niche products and special foams. This gives them the opportunity to flexibly react to changing market conditions and customer requirements and to distinguish themselves in the face of competition offering a broad spectrum of products.

Hennecke has already equipped numerous plants of leading slabstock manufacturers with the cell control technology.

Today, hundreds of Hennecke slabstock plants are being successfully used for the continuous production of manifold high-quality foam types the world over.



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