

Special reprint from FORM+Werkzeug 5/2006

HANSER

Keep parts safely in place with >vilmill<



vilmill™ by **Freudenberg**
patented

Freudenberg Vliesstoffe KG
Frank Martiné
69465 Weinheim / Germany
Tel. +49-6201-80 75 54
Fax +49-6201-88 75 54
vilmill@freudenberg-nw.com
www.vilmill.com

Special reprint

APPLICATION Machinery & Tools

Keep parts safely in place with ›Vilmill‹

MACHINING OF THIN SHEET MATERIAL. When machining thin and lightweight materials such as aluminium or plastic sheets at high speeds, the permissible forces and thus the rates of feed largely depend on how the parts can be fixed. This is especially true for the manufacturing of smaller parts which cannot be clamped using vacuum technology. Commonly used alternatives, such as increasing adhesion by means of paper or an adhesive spray are partial solutions at best. In this context, Freudenberg Vliesstoffe KG (www.vilmill.com) has developed a substrate which serves as a base between the part to be processed and the milling table. This material, called vilmill, is provided with an adhesive coating which is only activated during the machining process itself. When vacuum suction is used for fixing, the material's sophisticated fibre structure serves as a diffuser and increases vacuum efficiency. The process of milling by using vilmill is patented.

According to Freudenberg's experts, these two properties ensure greatly improved, repeatable fixation of the parts. Thanks to its adhesive coating and its sophisticated design, vilmill ensures the

safe machining of various materials such as non-ferrous metals or a wide range of plastics. Freudenberg's experts confirm that this substrate is especially suitable for use with glass, carbon-fibre plastics, aluminium, brass, copper and compounds. In addition to this, vilmill is environmentally friendly

and can be disposed of for thermal utilization. Field tests have shown that the rate of feed can be increased by up to 100 per cent even with very delicate parts. On a portal mil-

ling machine, for example, very thin materials could be machined under controlled conditions at feed rates of up to 20 m/min. Also, cutting parts can be positioned closer to each other as clamping devices are no longer required, and this ensures better utilization of the material. Vilmill is available in rolls and can therefore also be used on older milling machines.



Increased dynamics: Vilmill is already used in the aircraft industry where it allows the fast and controlled HSC machining of thin aluminium sheets.

Translated by Freudenberg Vliesstoffe KG