

# The Advantage of Silicon-Based Materials

Beyond the ordinary to the extraordinary, silicon-based products provide an advantage in nearly every industry segment of today's economy. Easily tailored, these materials provide routine features, such as high temperature stability and resistance to aging and chemical assault. These advanced materials also have the ability, depending on the material, to:

- Adhere
- Condition
- Control foam
- Improve appearance
- Connect
- Transfer energy
- Mask
- Reconstruct
- Seal
- Lubricate
- Purify
- Wet
- Insulate
- Protect
- Release
- Soften
- Conduct
- Deliver

## *Versatile*

Versatility is the hallmark of silicon technology. By varying molecular structure, network density, molecular size, or functional contents, a world of possibilities emerges: free-flowing resins, rigid plastics, rubbers, greases, powders, and fluids that are thinner than water or as thick as paste. Silicon-based materials can take on all of these different forms. And physical and chemical properties – such as thermal stability, strength, and weatherability – can be varied for specific applications. Because of this versatility, silicon-based materials are key ingredients in thousands of improved products.

## *Surface Properties*

What really differentiates silicon-based materials from other materials is their unique surface properties. These properties help Dow Corning customers create distinctive products. In many applications – such as adhesives, sealants, or coatings – a product must “stick” to another material. By careful design and formulation, Dow Corning scientists make these products bond directly with the substrate. At the other end of the spectrum, coatings can be designed to have unique “release” behavior, where there is no adhesion between the coating and the adhesive layer.

The flexible surface properties of silicon-based materials make them ideal for many applications, including paper and mold release agents, textile modifiers, water repellents, defoaming agents, anticaking aids, corrosion inhibitors, emulsifiers, lubricants, conditioners, and glass enhancers. These are just a few of the thousands of applications for silicon-based products.



**WE HELP YOU INVENT  
THE FUTURE.™**

[www.dowcorning.com](http://www.dowcorning.com)

**LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

*Dow Corning* is a registered trademark of Dow Corning Corporation.

*WE HELP YOU INVENT THE FUTURE* is a trademark of Dow Corning Corporation.

©2002 Dow Corning Corporation. All rights reserved.

Printed in USA

FPH32639