



#### Global Authorized Fabricator Network

We at Dow Performance Foams confidently support our Global Authorized Fabricator Network, so you have access to experienced and highly trained fabricators anywhere in the world.

To ensure the quality of our service matches the quality of our products, each network member has met stringent requirements to earn the status of Global Authorized Fabricator.

Your Global Authorized Fabricator will work with you to determine the best product to meet your needs, and ensure it is fabricated to meet your specifications. Global Authorized Fabricators can also assist you with design, prototyping, estimating and documentation to augment your capabilities for prompt production and shipment of quality parts.

**Guaranteed Performance**  
Everywhere in the world, Dow Performance Foams are uniform and consistent from batch to batch and shipment to shipment, with very predictable physical properties. This reliability means you can be assured of consistent antistatic properties, and can engineer protective parts to maximize performance and minimize costs in packaging, handling, shipping, and storage.

This performance is backed up with a 3-year guarantee that our antistatic foams will maintain their stated properties.

\*Trademark of The Dow Chemical Company

## Better Performance Really is Less Costly

You have a clear choice. Electronic Protection products from Dow Performance Foams provide superior antistatic properties, which last longer. Guaranteed. Our foam packaging materials stand up to repeated reuse, and protect sensitive products against impact, vibration and scratching. And, enhanced dimensional stability eliminates shrinking or swelling. The support of Dow in providing solutions to your specific issues, supporting design and engineering with ETHACALC Millennium software, and maintaining an experienced, trained, global network of authorized fabricators ensures that help is there when you need it.

In any analysis of overall cost, getting a superior product that is guaranteed, competitively priced, and backed up by the resources of the market leader is a sure way to improve your business performance.

#### How Can We Help You?

Dow Performance Foams shares in The Dow Chemical Company heritage of scientific innovation. Our customers benefit not just from our products, but also from our thinking. We'd like to hear about the packaging issues you're facing, whether related to impact, vibration, scratching, material handling, storage, or some other problem. We will work with you to create a solution that can help your business become even more successful. Contact your local Dow Performance Foams representative, call 1-866-PKG-FOAMS (754-3626) in North America or 00-800-36-946367 in Europe, or reach us online at [www.performancefoams.com](http://www.performancefoams.com).



### Performance Foams

Dow Performance Foams  
The Dow Chemical Company  
200 Larkin Center  
Midland, Michigan 48674  
U.S.A.

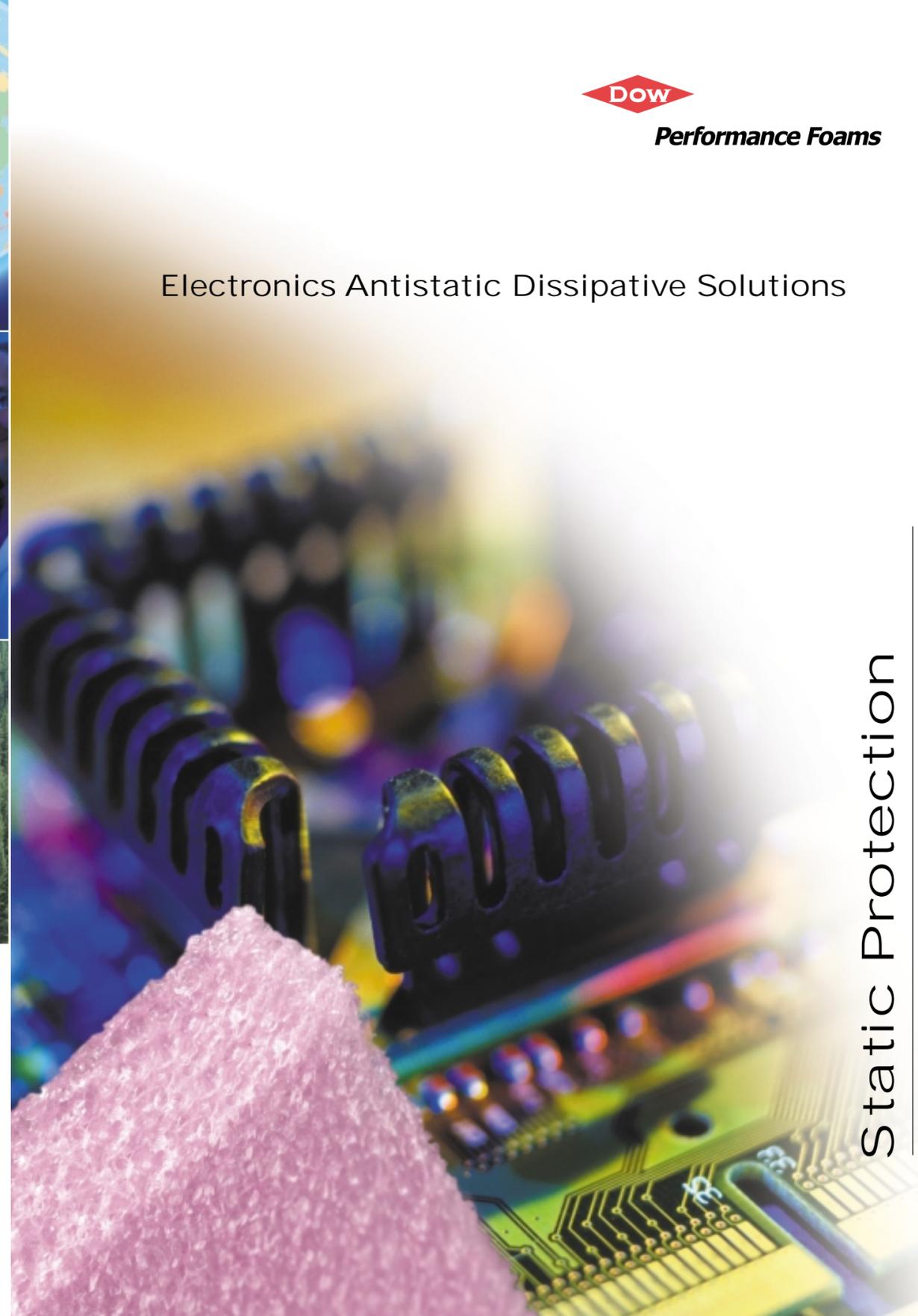
Dow Performance Foams  
The Dow Chemical Company  
IndustrieStrasse 1  
D 77836 Rheinmunster  
Germany

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### Performance Foams

## Electronics Antistatic Dissipative Solutions



Static Protection

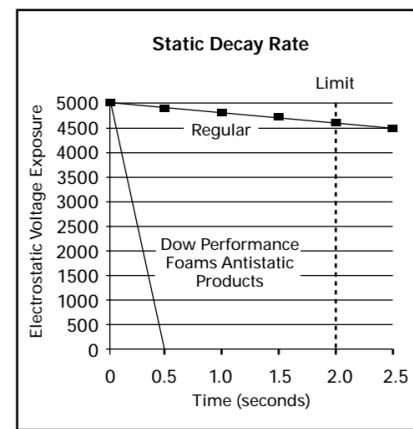
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# The Shocking Truth About Electrostatic Discharge

An excited consumer brings home a brand-new piece of electronic equipment, only to find that it doesn't work properly. The culprit is one small processor, damaged by electrostatic discharge somewhere between its manufacture and delivery of the finished product.

How do you calculate the price of this scenario? There's the cost of service and replacement, then there's the cost of your reputation for quality, and of a negative consumer experience.

In your world, electronic protection solutions are about a lot more than finding the least expensive material. The right solution is the one that combines the lowest total cost with the most reliable performance. Quality products from Dow Performance Foams offer superior attributes, customized solutions, and consistent reliability on a global basis.



**Figure 1** – Compared to standard polyethylene foam, antistatic products from Dow Performance Foams conform to the requirement to dissipate a 5000-volt charge to 50 volts at 23°C (73°F) and 12% relative humidity in less than 2 seconds.

Enhanced Protection During Assembly, Transit and Storage Processing, friction and other movement cause common packaging materials to develop electrostatic charges. When a product is packaged the material, electrostatic discharge can easily damage or even destroy sensitive electronic components. Electrostatic discharge can occur at any point during the assembly, manufacturing, packaging, shipping and receiving of electronic devices. As the complexity of the device increases, the voltage needed to destroy it becomes smaller.

Most electronics manufacturers use some pink foam in an effort to control electrostatic discharge, but many have been surprised to discover that some pink foam packaging materials have little or no antistatic properties.†

The electronic protection foam products from Dow Performance Foams, however, feature a proprietary antistatic process that provides a much longer span of protection than typical applications used on other antistatic materials.

Under the most severe testing conditions (23°C [73°F] and 12% relative humidity) Antistatic Polyethylene Foams from Dow Performance Foams have a typical surface resistivity of less than 10<sup>12</sup> Ohms/square and a surface resistance of less than 10<sup>11</sup> Ohms.

In the assembly environment, static-sensitive products are protected by controlled dissipation of electrostatic charges, discharging

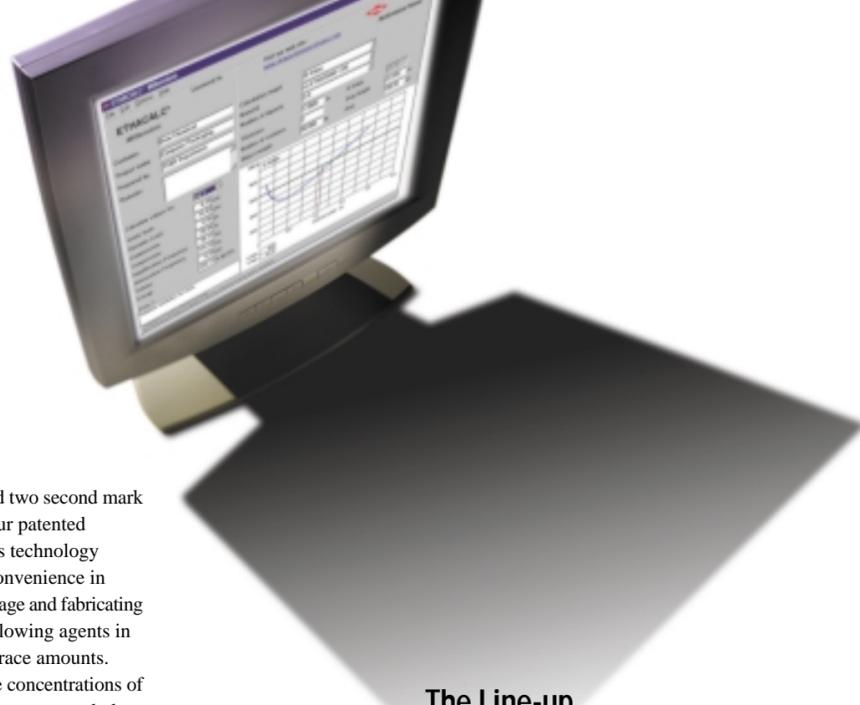
way below the required two second mark (see Figure 1). Plus, our patented RapidRelease\* process technology enhances safety and convenience in shipping, handling, storage and fabricating by reducing residual blowing agents in our foam products to trace amounts. Eliminating flammable concentrations of blowing agents means greater workplace safety. And, unequalled dimensional stability means no shrinking or swelling during the fabrication process or for end-user applications.

Products from Dow Performance Foams also safeguard electronics from:

- **Electrostatic discharge**
- **Electrical overstress**
- **Dust accumulation**
- **Minor surface damage**
- **Major impact/vibration damage**

Our products are also environmentally friendly because they are recyclable and capable of being reused several times while continuing to deliver consistent protection.

When tested three years after production, Dow Antistatic foam products meet ESD approval as static dissipative materials, unlike most standard static dissipative packaging materials which have an average shelf life of one year on their electrostatic performance.



## The Line-up

ETHAFOAM Polyethylene Antistatic Foam  
ETHAFOAM\* 400 AS, ETHAFOAM 220 AS, ETHAFOAM Select AS and ETHAFOAM 221 AS foams each provide a superior combination of antistatic properties and protection from impact and vibration.

The antistatic characteristics of ETHAFOAM AS foams are compounded into the foam with an internal additive, unlike other foams, which are simply treated with an antistatic topical coating. This is why ETHAFOAM AS foams retain effective antistatic properties for more than three years from the date of manufacture.

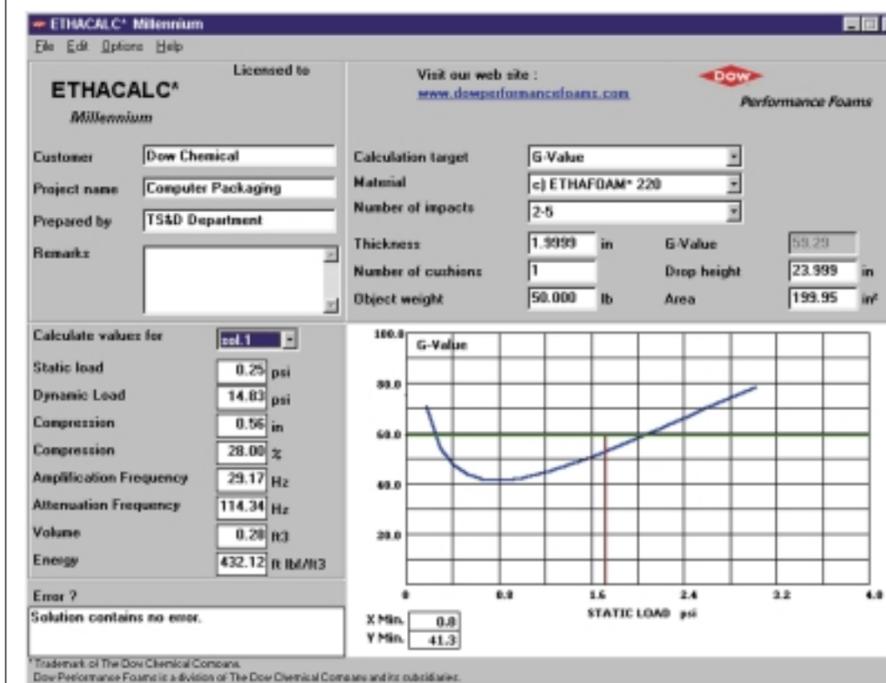


- **ETHAFOAM 400AS: medium-density plank ideally suited for packaging applications for impacts or loadings up to 35kPA.**
- **ETHAFOAM 220 AS: Medium-density plank with superior dynamic cushion properties ideally suited for high-value, fragile products**
- **ETHAFOAM Select AS: Low-density plank with superior dynamic cushion properties ideally suited for high-value, fragile lightweight products**
- **ETHAFOAM 221 AS: Ideally suited for smaller and lightweight products**

ETHAFOAM AS foams provides superior protection from shock, impact, abrasion and vibration, making them ideal for cushion packaging. ETHAFOAM AS foams are used in component, circuit board and materials-handling applications, protecting large and heavy parts more efficiently than other packaging materials. In sheet form, ETHAFOAM AS foams are used for interleaving and as antistatic cushioning wrap for smaller parts and components.

Introducing: Custom Design Support at your Fingertips

ETHACALC\* Millennium computer software, offered exclusively by Dow Performance Foams, provides a practical tool to quickly and accurately calculate the dimensions of the cushion packaging required for your application.



ETHACALC software equips designers with all of the data needed to determine the right foam specifications.



No matter what the application, products from Dow Performance Foams can be manufactured to provide a customized, cost-justifiable solution.

Photographs courtesy of Berako.

†The color pink is used as a color code identification for antistatic products and has no bearing on performance.