

What's in a nano name?

Industry calls for consistent terminology

BY ANDREAS VON BUBNOFF

Nano means one billionth of something, but when it comes to labeling consumer products, it can mean vastly different things: nano-sized particles, a nanoscale thin film, even nano-sized air pockets. And some products labeled “nano” don’t contain anything nano at all.

Environmental groups and academic and business experts agree on a need for consistent labeling of nano products to indicate which ones contain a nanomaterial or nanotechnology. But they disagree on why that’s important and how to get there.

Recent inventories of nano products by the Woodrow Wilson International Center for Scholars and by environmental group Friends of the Earth include products as varied as sunscreens that contain nanoscale particles of titanium dioxide and shoe insoles with nano-sized air pockets. David Rejeski, who directs the Project on Emerging Nanotechnologies at the Wilson Center, said during a search for nano products, he even came across a “nano” kayak which has nothing nano in it, except that it is small – relative to other kayaks, that is.

There are no labeling guidelines, Rejeski said, and for consumers, it gets very confusing. “Are there nanomaterials in here? Are you applying a nanoscale layer?” he asked. “Are there nanoholes? What is the nanothing?”

In the case of the glass and bathroom sealant “Magic Nano,” which was recalled in Germany in March because

it caused breathing problems in consumers, the “nanothing” was supposed to be a nanoscale layer of silicon dioxide that the product creates on surfaces, according to the manufacturer. There had been concern that there were nanoparticles in the product, but the Federal Institute for Risk

Assessment (BfR) in Berlin announced on May 26 that the product did not contain nanoparticles.

Mandatory labeling is one way to deal with the confusion, say eight consumer, health and environmental groups. On May 16, the groups, which include Friends of the Earth and the International Center for Technology Assessment, or CTA, filed a petition with the Food and Drug Administration that calls for mandatory labeling of nanotech products.

Currently, companies can call their products nano regardless of whether they contain anything nano or not, said George Kimbrell, staff attorney for the CTA.

“There is no regulatory oversight and no standards for labeling,” said Kimbrell, the main author of the petition. “The consumer has no way of knowing.”

Business representatives agree on the need for consistent labeling, but want to keep it voluntary. “We encourage people to be transparent when using nanotech,” said Sean Murdock of the NanoBusiness Alliance, the U.S. trade association of the

nanotech industry. The Alliance, he said, is currently compiling its own database of products that use nanotech.

“I think there is a lot of confusion about what nanotech is,” said John Bailey, executive vice president of science for the Cosmetic, Toiletry and Fragrance Association, an industry group. “A more thoughtful definition would help clarify the issue considerably for some of our consumers.”

But before any labeling can be done, there needs to be consistent terminology, said Vicki Colvin, who studies nanoparticle toxicity at Rice University. “We can’t even agree on what to call a nanoparticle,” she said.

Murdock agrees. “It’s one thing to petition for labeling, assuming that we have the terminology to be consistent with what we are putting on the label,” he said. “We don’t yet.”

That’s about to change. The International Organization for Standardization, or ISO, is developing international standard terminology for nanoparticles and other things nano, said Clayton Teague, director of the National Nanotechnology Coordination Office. The ISO is also developing standards for how to measure nanomaterial content of nano products, he said. Industry will be able to use the standards on a voluntary basis.

Teague expects basic ISO standards, for example on how to define a nanoparticle, to be available in a few years.

But that may not be fast enough, Rejeski said. “The problem is that in two years you will have a whole new generation of products out there on the market.”

What’s more, coming up with consistent “nano” terminology won’t be easy, given that nanoparticles come in so many forms, Colvin said. “All nanoparticles are not the same.” ■



Photo courtesy of NanoBusiness Alliance

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Photo by George Craig

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