



HOW TO SELL

Water-resistant down

Today's down isn't afraid of water. Find out how nature's best insulator has become water-resistant — and why it's time to shift your customers' down paradigm.

WATER IS DOWN'S ACHILLES HEEL. DESPITE THE INSULATION'S superior warmth-to-weight ratio and ability to compress, if you get it wet, it's useless. Campers heading to rainy Pacific Northwest or the hot and humid Southeast, frequently bypass down and go with a synthetic insulation instead.

Outdoor retailers and consumers alike have been drilled in such thinking for decades. But in 2012 and beyond, they can begin to reconsider all that conventional wisdom.

New advancements to make down feathers and clusters water-resistant have hit the outdoor market by storm in sleeping bags, jackets, gloves and booties. The new technology adds negligible weight at minimal cost, creating little downside for added performance.

In selling these products in your store, your first job is to shift the down paradigm of the past. Today's new hydrophobic down can withstand a little rain, a spill or sweat without losing its all-important lofting insulation power. The new

technology doesn't waterproof down, but makes it pretty water resistant.

In other words, customers will still have to take care of down products, just like any other outdoor gear, but they no longer have to baby it.

DOWN PROTECTION

There have been many strategies over the years to protect down from its archrival: moisture.

Be it rain, snow, sweat or humidity, when moisture comes in contact with an untreated down feather or cluster,

it soaks and collapses the structure. That structure is what creates the loft to trap the heat produced by the user, leading to insulation. Without loft, there is no insulation.

Up until now, the primary method to protect down from moisture has involved the outer layer. Brands use the same waterproof-breathable materials in rain jackets and footwear to surround the down and repel the elements. There are two downsides, however. One is cost—the waterproof-breathable fabrics are expensive. The second is a barrier to breathability. Waterproof materials, even those that “breathe,” are significantly less air-permeable than other materials. So while users might keep their down sleeping bags or jackets safe from the rain, they’re likely creating moisture on the inside with sweat.

Because of these factors, you’ve likely been leading your customers over to the synthetic insulation aisle. While synthetic insulation isn’t as light, compressible or long-lasting as down, it has the advantage of retaining most its insulation power after getting wet and being more affordable.

To regain a leg up on the competition, outdoor brands sought a way to bolster the down itself with synthetic insulation’s most important upside—water resistance. They found the answer in the medical field, where hospitals use pillows filled with down

Testing methods

While there are standardized testing methods for sleeping bags, such as EN13537, none take much account for the variable of moisture. So in the early going, manufacturers are doing most of the testing. Here are the tests that lead to the performance claims.

>> **The shake test** measures how long it takes for water-resistant down versus regular down to saturate, after each is placed in container of water and shaken. The additional amount of time that treated down upholds is measured and converted to a multiple, leading to the claim that water-resistant down stays drier X times or Y percent longer than regular down.

>> **The loft test** measures how much loft is maintained with the product exposed to moisture over a certain period of time. The greater loft of treated down is measured by height and converted to a multiple, leading to the claim that water-resistant down retains X times or Y percent more loft than regular down.

>> **The drying time test** measures how long it takes for the down to dry from an intermediate point of saturation. The faster drying time of treated down is measured and converted to a multiple, leading to the claim that water-resistant down dries X times or Y percent faster than regular down.

treated with a water-resistant polymer to protect the fill from common spills.

When outdoor brands got hold of the technology, they worked with scientists to lighten the treatment and improve it for outdoor use.

HYDROPHOBIC PROPERTIES

Water-resistant down opens up insulation options for customers heading to rainy or humid environments. Now they don’t have to necessarily forego down, though in extreme wet conditions, synthetic

may still be the way to go. Make sure to highlight these important points with customers considering a water-resistant down product:

>> **It’s not waterproof.** No matter the brand name, DriDown, DownTec, Down Defender (see section below), none of the companies claim waterproofness of the down itself. If a customer sleeps outside in the pouring rain all night, or submerges a sleeping bag in the river, the water-resistant down will soak through.

>> **It’s water-resistant.** If it happens to rain or snow for a short period, or condensation falls from a tent, these are the instances where the new technology will perform to retain loft and insulation power—about seven times longer than regular down, brands say. One test shows the treated down retaining 98 percent of its loft after a night in a high-humidity environment, versus 70 percent loft retention with untreated down.

>> **It dries faster.** If there is an instance where water-resistant down gets wet, it maintains an advantage over regular down in that it dries faster—by about 33 percent, brands say. So if a rare accident happens, where the sleeping bag falls in the river or is



Water-resistant down



Regular down

★ THE REVOLUTION IS HERE



DRIDOWN 

★★★★★★★★★★★★★★★★★★★★
You no longer have to fear the wet. Sierra Designs DriDown™ is a revolutionary natural down insulation treated with a hydrophobic finish. Go where down hasn't gone before. [LEARN MORE AT SIERRADESIGNS.COM](http://SIERRADESIGNS.COM)

Gnar Lite ★★



left out in the pouring rain, while it won't immediately be useable, it will recover faster than regular down for future use.

>> It battles sweat. A lot of customers might be worried about rain, snow or humidity, but the most common form of moisture affecting down is the user's sweat. That's why on a long multi-day trips, even in dry climates, people report feeling a little bit colder in their down sleeping bag or jacket each night. The down progressively is collecting moisture from perspiration and losing loft. Water-resistant down fights off that moisture and maintains more-consistent insulation over time.

>> It might last longer. There are no long-term studies yet, but it stands to reason if the water-resistant treatment is protecting down from moisture, it could make the down plumes stronger and less susceptible to break down, which is how down eventually loses its lofting capability.

>> There's minimal cost and weight increase. Cost increase of a water-resistant down product over the same regular down product should be modest — about 5 percent on average, and no more than 10 percent, brands say. Weight gain is negligible at less than 2 percent.

>> There are no known environmental concerns. When the water-resistant treatment is properly applied to down, there are no known environmental concerns or risks to human health, brands say. With normal use and care, the treatment remains with product for its lifetime and does not wash out. At home, customers should clean, care for and store the product as they would a regular down product.

WATER-RESISTANT DOWN BRANDS

Outdoor brands Sierra Designs and Brooks-Range Mountaineering were the first to market with water-resistant down products, but many manufacturers are jumping on the bandwagon.

Sierra Designs and its sister brands Kelyt and Isis offer their proprietary DriDown. Third-party supplier Down Decor provides its DownTek to Brooks-Range, Big Agnes and Nemo. And by the close of 2013, your store can expect to see a flood of proprietary names like Marmot's DownDefender, The North Face's ProDown, Mountain Hardwear's Q.Shield Down and Sea to Summit's Ultra-Dry Down.

Customers might ask: "Which is best?" The definitive answer is elusive. Independent testing and reviews are still being conducted. Early anecdotal evidence suggests the technology works, but there isn't much difference between brands. In reality, most of the brands are getting the raw material from the same few suppliers.

Several brands are working to establish testing standards (*see sidebar, page 2*) that would best measure water-resistant down's performance enhancements.

PRODUCTS

Any product that uses regular down can be made with water-resistant down. The application makes most sense in products that could encounter more moisture like a pair down booties or gloves. It remains to be seen whether brands will shift entirely to water-resistant down, have a mix, or shun the technology all together.



Sierra Designs' new Cloud Puffy uses the company's proprietary DriDown.

Any fill power of down can be made water resistant, but it's a little trickier to deliver a consistent application at those higher fill powers, so performance at that level, when eventually tested, may be where we'll see differences among brands.

A STEP AHEAD OF MAIN STREET

There's one final note to consider with the advent of water-resistant down.

Down insulated products have been hot sellers these past few winters. What started as a trend in the outdoor industry quickly spread to the urban fashion market with practically every brand or store from Madison Avenue to Target offering a version of the down puffy jacket.

That put pressure on the outdoor industry to innovate to set their products apart and above the rest.

Water-resistant down, at least for now, achieves that. It's a great performance story to tell customers, especially if they've become accustomed to seeing half-priced puffers at the big-box store down the street.



Water-resistant down can be used in any product, like this Sierra Designs Cal 13 sleeping bag, to battle raindrops and sweat.

AUTHOR: David Glucas
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