

MUST DO

[INSIGHT SPECIAL]



Got a waterproof but still feeling wet and cold? You need to read on...

Proofing: the truth

TOM BAILEY

Getting wet in your nearly-new £200 waterproof jacket? Our world-first test suggests it probably needs reproofing already – and there's a shock new contender for the job.

Your new waterproof jacket could leave you wet after just 30 miles, and Comfort fabric conditioner is as good at reproofing it as several expensive hi-tech formulas, our latest lab tests reveal. Comfort Pure concentrate provides greater water repellency on first application than half the dedicated proofers on the market, remains effective longer than two, and lasts 64% as long as the best.

Waterproofs need a durable water repellent (DWR) treatment as well as a waterproof layer because without it the jacket's outer fabric soaks up rain and 'wets out'.

Wetting out drastically reduces the waterproof's ability to breathe, leaving condensation to soak you from inside. It also causes the insulating ability of your jacket to plummet, making you cold.

Jackets are treated with DWR at the manufacturing stage, and it's this treatment you need to renew once normal usage has worn it out. This happens surprisingly swiftly – especially in high-wear areas like under your rucksack shoulder straps and hipbelt. To test which reproofing agent was the best, we pitted all the available treatments against one

another, along with Comfort Pure concentrate as a wild card. **THE LAB TESTS** At Leeds University's Performance Clothing Research Group, all the treatments were applied as per the instructions to samples of Gore-Tex XCR fabric which had been stripped of its DWR. They were then subjected to the British Standard 3424-26:1990 Spray Rating Test, and given a score, where 50 equals complete wetting out of the fabric surface (no water repellency) and 100 equals zero wetting out (total water repellency).

This told us how effective the treatments were on first application. Next, the samples were subjected to an abrasion test designed to replicate the rubbing of a rucksack strap on the shoulder of a jacket during walking. Every 500 rubs represent 1 mile walked. The samples were deemed to have failed when they received a Spray Rating below 80 – the point at which the fabric wets out where struck by the spray. This told us how long the treatments were likely to last at the most vulnerable place on your waterproof in normal use.

MANUFACTURERS' COMMENTS

Trail invited the manufacturers to comment on these results:

Granger's
"Our ongoing quest to find better solutions for the re-application of DWRs is borne out by these tests. We know that there is currently no performance substitute to fluoro polymer technology, which is used by all of the major brands in their factory application of DWR. Granger's

combines with the DWR remaining in the fabric, and this is just one of the reasons the product works so well."

Nikwax
"Nikwax does not use fluorocarbons for health and environmental reasons. We have been following the environmental risks associated with fluorocarbon products carefully for five years. Reports on their toxicity and hazardous nature have only

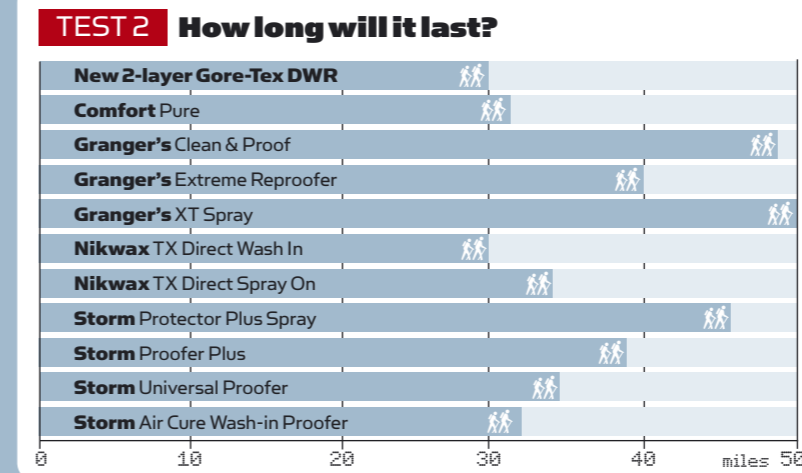
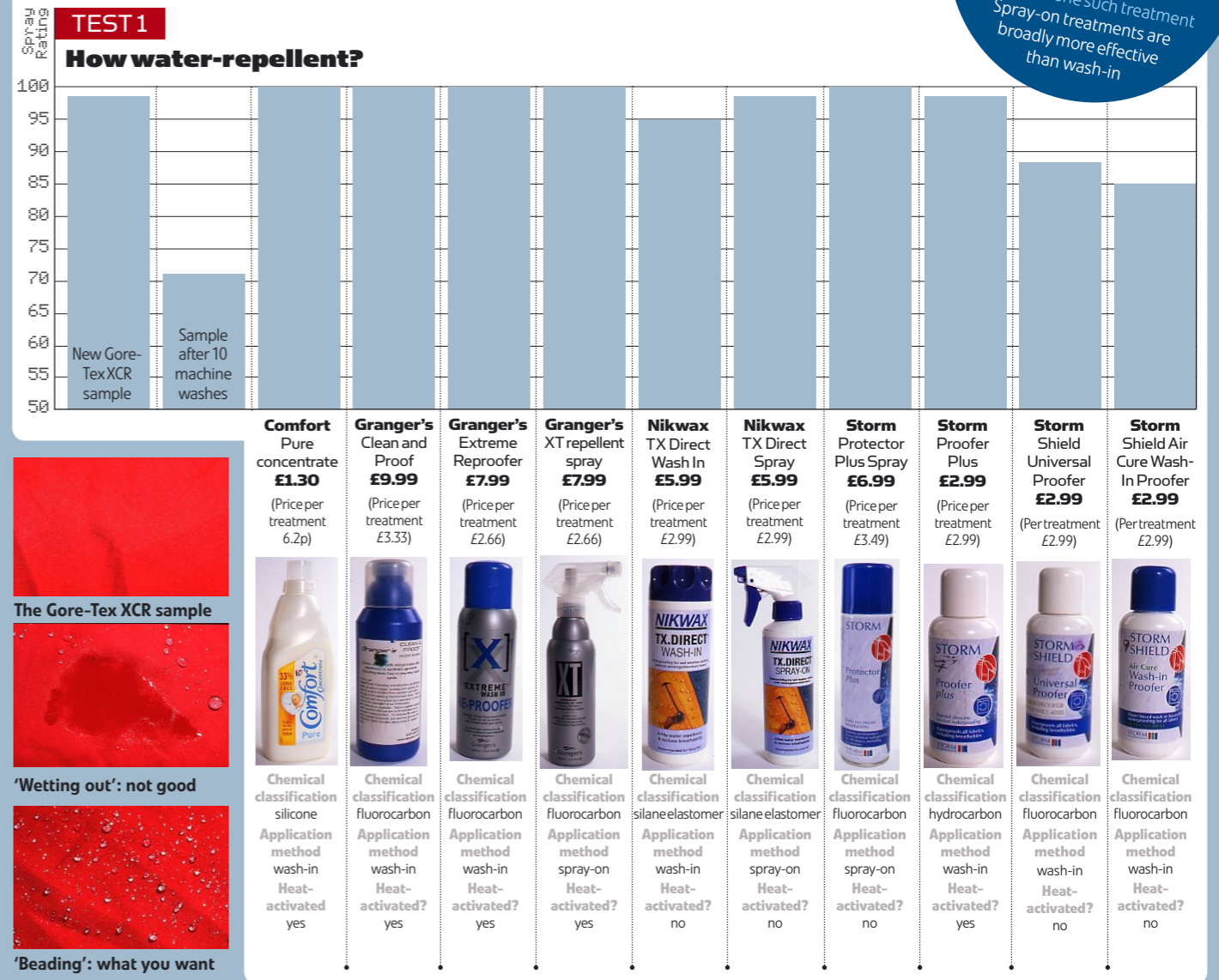
become more extreme over that period. Nikwax does not consider fluorochemical water-repellents to be safe materials for use in the home."

Storm
"Storm is being re-launched this month and the products tested here will no longer be available in their current name or chemical format. The Air Cure Wash-In Fluorocarbon will have increased its strength by 20%."

Unilever (Comfort)
Declined to comment.

Stockist details
Granger's – tel. (01773) 521521; www.stay-dry.co.uk
Storm – tel. (01475) 746000; www.amg-outdoor.co.uk
Nikwax – tel. (01892) 783855; www.nikwax.com
Unilever (Comfort) – tel. (020) 7822 5252; www.unilever.com

What this test reveals
All reproofing treatments replenish Gore-Tex to a level where it won't wet out. Some can even render the DWR better than new. Comfort is one such treatment. Spray-on treatments are broadly more effective than wash-in.



Conclusion
"I'm blown away by this," says Dr Mark Taylor of the Performance Clothing Research Group. "The effectiveness of Comfort is a shock. I'm also disappointed the dedicated treatments didn't last longer under abrasion: 30 miles is little more than a weekend's walking for Trail readers." Technical editor Graham Thompson concurs: "It seems DWR isn't that durable. You've got to reproof your jacket far more often than previously thought if it's to keep its performance."

What this test reveals
All reproofing agents are only able to maintain durable water repellency (DWR) for a limited period while undergoing abrasion. Reproofing may be required as often as after every weekend for active walkers. Waterproof shoulders that feel like they're leaking are probably long overdue a reproofing. Comfort Pure concentrate is a highly cost-efficient way of reproofing your waterproof frequently. Fluorocarbon-based proofers are more durable than silicone or silane elastomer-based products. Comfort Pure would be a bad choice of product to use on base layers, its DWR effect reducing garments' ability to 'wick' your sweat away.

What it doesn't show
Some studies suggest fluorocarbons are not good for the environment or human health and that they may biodegrade to more harmful materials, though Granger's says its have been proven "free of the chemicals specific to concerns".

