

## Hohenstein's New Testing Method Determines Microfibers' Environmental Impact



[COURTESY]

Microfibers—the tiny fibers that break loose from textiles—might be small, but they add up to a significant environmental concern. A University of Plymouth study found that up to 700,000 microfibers can be released in a single 13-pound load of laundry. Wastewater treatment removes most but not all microfibers, and these small fibers enter bodies of water, where they are ingested by marine life and enter the food chain.

“Microplastics is a topic that plays a major role today when it comes to issues such as environmental pollution and health aspects [of] animals and humans,” Dr. Timo Hammer, CEO of testing firm Hohenstein, told Sourcing Journal. “As the textile industry is one of the main sources of microplastics, the pressure on companies is growing.”

Hohenstein has been focused on reducing microfiber release for years. The company is a

research member of the Microfibre Consortium and a signatory of its Microfibre 2030 commitment. Hohenstein offers multiple testing services on microfibers released from textiles, including gravimetric tests that measure the mass of microfibers and its Dynamic Image Analysis, developed as part of a Ph.D. thesis, which is able to determine the number, lengths and structures of microfibers. Now, Hohenstein is expanding its test offering in this area with a new standardized method to measure not only how many microfibers textiles release during laundering, but the environmental impact of these fibers.

Called DIN SPEC 4872, the testing method includes three assessments. First, it studies the number of fibers released via laundering. “Compared to the existing gravimetric standards, this method only measures the portion of the fiber-based microfiber discharge that is actually caused by the textile,” said Hammer. “This is a great advantage, as impurities, metal abrasions, foreign fibers, etc. do not falsify the result. Another advantage is that with the help of a chemical treatment, the ratio of cellulose-based to synthetic fibers can be determined.”

Next, Hohenstein evaluates how the fibers biodegrade, including verifying whether they do

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degrade in aqueous environments, and to what degree. Roughly 60 percent of clothing is now made with synthetics like polyester, which are considered microplastics and typically persist in the environment for longer than natural materials like cotton or wood-based fibers. Hammer noted that although cellulosic-based fibers are not deemed microplastics, they might still have “poor biodegradability.”



Even if fibers biodegrade, what remains after this degradation can be harmful, according to Hohenstein project manager Juliane Alberts. “Biodegradability alone does not mean that pure natural fibers, for example, are completely harmless to the environment,” she said.

“They, too, remain in ecosystems until they completely degrade and can also have a negative impact. In addition, additives, auxiliaries or finishes used in textile production can further slow the degradation process and leach into the environment.”

To determine the level of toxicity of fiber residues, Hohenstein has modified an existing

standard for textile testing, in which duckweed is placed in wastewater to see whether growth is inhibited.



Following the testing procedures, which typically take approximately 10 weeks, Hohenstein gives the textiles a classification code based on the fiber discharge, rate of biodegradation and toxicity. “Based on this classification, textile manufacturers, retailers and customers can easily recognize to what extent the environment may be polluted and actively decide to contribute to an improvement,” Hammer said. “The detailed results also offer the opportunity to scrutinize processes and improve them on this basis.”

Hohenstein intends for this testing method to assist the industry in making sourcing and product development decisions. “Our reliable data can be used as a basis for more targeted product development,” Alberts said. “This is a way to actively and consciously control further environmental pollution.”

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This standard can also help to scientifically verify product claims. “The term sustainability is not protected, and thus greenwashing is practiced,” Hammer said. “Standardized and recognized test procedures as well as definitions of terms can help. Therefore, the development of this DIN SPEC is a step in the right direction.”

### **Link**

<https://sourcingjournal.com/sustainability/sustainability-news/hohensteins-testing-method-microfiber-pollution-microplastics-environmental-impact-419295/>

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## UFLPA: What Insiders Say About Forced-Labor Law's First 8 Months



[THE UYGHUR FORCED LABOR PREVENTION ACT WENT INTO EFFECT IN JUNE 2022. MANUEL AUGUSTO MORENO/GETTY IMAGES]

It's been eight months since the United States put into effect a far-reaching law aimed at cracking down on forced labor in China. So is it working as designed? The answer depends on whom you ask.

Certainly, no one denies that the Uyghur Forced Labor Prevention Act, or UFLPA, serves a vital function: preventing firms from knowingly—or even unknowingly—trafficking into the country goods made under coercion by Uyghur and other Turkic Muslim minorities, particularly those in the northwestern region of Xinjiang, where Chinese authorities have unleashed a campaign of persecution that many have labeled genocide. By imposing a “rebuttable presumption” that all goods made in whole or in part in Xinjiang are tainted with modern slavery and therefore barred unless “clear and convincing” evidence proves otherwise, lawmakers meant to take a stand against the

atrocities and persuade China to end its repressive policies.

“The whole point of the UFLPA is just to essentially force companies to redirect their sourcing out of a region that is using systematic forced labor as part of a campaign of crimes against humanity,” said Allison Gill, forced labor director at the Global Labor Justice-International Labor Rights Forum, a Washington, D.C.-based think tank. “We have a moral obligation to take action to try to stop what is an ongoing human rights crisis of which forced labor is a core component. So the idea is to change that behavior.”

Another goal, she added, is compliance with U.S. law, which has outlawed the import of forced labor goods, no matter their origin, since the establishment of the 1930 Tariff Act. Until recently, the prohibition has been weakly enforced, in part because of a since-closed “consumptive demand” loophole, which exempted such goods if the United States couldn't produce them in sufficient quantities to meet consumer needs.

In terms of blocking goods, the UFLPA appears to be a ringing success. Between June 2022

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nd January 2023, Customs and Border Protection—CBP for short—flagged roughly 2,700 shipments, valued at more than \$814 million, for potentially violating the terms of the statute. Of these, one-sixth were categorized as apparel products. And for good reason: Cotton is a booming business in Xinjiang, which produces more than 90 percent of China’s total, possibly by dragooning more than half a million Uyghurs to pick cotton by hand through a state-sponsored labor transfer and “poverty alleviation” scheme. In turn, Chinese cotton makes up some 25 percent of the world’s supply of the fiber.

Exports from Xinjiang to the United States, even by Chinese customs’ own admission, have been falling precipitously, even as they have increased everywhere else, including the European Union, which is putting the finishing touches on its own forced labor ban, albeit one that doesn’t explicitly target the province.

According to Dr. Sheng Lu, assistant professor of fashion and apparel studies at the University of Delaware, Xinjiang exported nearly \$6.4 billion worth of garments and textile-containing accessories in 2022, up 81 percent from the year before.

The UFLPA, said Richard Mojica, who leads law firm Miller & Chevalier’s customs and import trade group, has motivated companies—predominantly those related to textiles and solar, both targets of the law, in addition to the

Withhold Release Orders that preceded it—to “elevate” Chinese forced labor as a top compliance issue.

“That has prompted companies to conduct additional diligence on mapping their supply chains, conducting first-, second-level reviews of suppliers and so on,” he said. “In some cases, it has also prompted companies to reshuffle their supply chains and move away from certain supplier relationships [or] entirely from China. And so, if you view it from that perspective, I think the UFLPA has certainly been a very powerful tool to affect change.”

Still, amid this backlash Beijing has remained defiant, decrying the forced labor narrative as the “lie of the century.” It plans to double down on Xinjiang’s textile industry through the construction of up to five new industrial parks, creating 450,000 jobs. When Better Cotton, the world’s largest sustainable cotton initiative, pulled out of all field-level activities in Xinjiang in 2020, China created its own homegrown standard as a direct rebuke.

Nate Herman, senior vice president of policy at the American Apparel & Footwear Association, a trade group that represents heavy hitters like Adidas, Gap Inc., J.Crew Group and, more recently, Shein, agrees that the law has been able to prevent goods that have a “nexus” with Xinjiang from hitting the American market.

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Whether it has shifted China's rhetoric, however, is another matter.

"The goal of the ULFPA was to end the oppression against Uyghurs in Xinjiang," Herman said. "That hasn't happened and I don't think it's moved forward the ball on that."

One grouse often repeated by importers is the lack of transparency over whose goods are stopped and what triggers a discharge. Approximately one-third of shipments flagged for inspection end up being released, a customs official said, though this was news to Herman, who said that "actual enforcement statistics" are in short supply beyond occasional operational updates. The "definitive process" he thought would materialize hasn't happened.

"Even today, importers [will tell us] that a shipment is detained because of the UFLPA," he said. "They are not told why it was detained or which part of the shipment was [in violation] of the UFLPA. They don't know if it's the supplier, the country, the type of products—they don't know anything."

In a way, CBP is "creating more work for itself" because if an importer petitions to get a shipment released it will have to prove that there's no nexus to Xinjiang or a firm on the Entity List for every single product in that shipment, Herman said.

"So when they submit the petition, they are submitting hundreds, if not thousands of documents, all translated into English, and then CBP has to go through all those documents," he said. "And so that takes time, anywhere from six to eight weeks. And in our industry, when you're talking about seasonal products, six to eight weeks could render a shipment worthless."

Mojica understands why importers would be confused—and perturbed. "If you look at it from the company perspective, especially a company that has a robust, responsible sourcing program and would jump at the opportunity to address any issues in the supply chain, those companies have been very frustrated when merchandise is detained," he said.

"The idea of not knowing how to fix the issue, and what to look for in building compliance programs and vetting suppliers is something that is causing a lot of concern," he added. "Because it has been practically hard to operationalize some of the programs, especially a program where supply chains run through China."

Civil society groups would like more trade information to be made public, said Gill, adding that organizations like hers are "quite interested" in finding out what evidence CBP finds compelling "to the extent that they can share

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that.” Transparency, she said, is really “key” to more effective enforcement. It’s also an important step to ensuring more global alignment on import bans—the United States cannot tackle forced labor that “really infects” a commodity or an entire region of production alone. Neighboring allies like Canada and Mexico—both of which have banned forced labor products in line with the U.S.-Mexico-Canada Agreement—are particularly important in casting a tighter net, Gill noted.

A customs official said that CBP, as the largest law enforcement agency in the country, is bound by some restrictions regarding the information it’s able to share, whether it’s because of trade secrets or to maintain business confidentiality. It tries to take a risk-based approach, he said, one that makes sure it’s the “least disruptive” to lawful trade while also “being very responsive” to issues of forced labor.

“We can’t say, ‘don’t source from this specific company,’” he said. “We can’t tell companies who to do business with; companies need to be able to make those decisions independently.” Not that CBP isn’t aware of the criticisms about its perceived opacity. On Thursday, the agency released a fresh tranche of guidance, which it said was “in response to industry’s requests for additional resources” to comply with the statute. These include revised frequently asked questions, best practices for applicability reviews and advice on document submissions.

There are things CBP would prefer to play close to its chest, however. The customs official likens it to speed traps on the highway—“We can’t specifically say, on this day, we’re going to set up a speed trap right here because then [people will just get around it],” he said. “But we don’t leverage any super secret information. There’s no classified intelligence that comes in that gives us information on supply chains at risk. Everything is open source. Everything has been relatively in the public sphere.”

Still, the fact that barely anyone has tried to rebut the rebuttable presumption to date shows that the UFLPA, as the “most influential piece of trade legislation in years,” wasn’t conceived or drafted as such, said John Foote, a partner in law firm Kelley Drye & Warren’s international trade practice group. This has resulted in a “lot of important issues and questions that are unresolved by the UFLPA,” he said.

“Every other entry that is being detained under the UFLPA is being resolved on a basis that is being worked out by customs on its own, not with the guidance of statute,” Foote said. “In other words, all those applicability reviews. Now that’s not inherently problematic, per se. But it is an indication that the law wasn’t written with an understanding of the guesswork associated with identifying merchandise that could be subject to the presumption.”

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The customs official said that things have gotten a bit “twisted.” Ultimately what CBP aims to do is follow its normal regulations and allow importers due process.

“Most of the time, importers are saying, ‘Well, I manufacture this in Malaysia; there is nothing tied to the Xinjiang region,’” he said. “But we know that Malaysia is a major transshipment point; a lot of inputs in China are going into Malaysia for downstream manufacturing. So that in itself, because of the ‘whole or in part’ piece can make that shipment subject to the UFLPA.”

Even so, Foote argues that the Tariff Act is nearly a century old and has never “substantially evolved, let alone properly modernized” beyond the consumptive demand provision. While CBP has gotten “most of the big pieces” of what is a considerable challenge, he said, there’s “never been a serious policy discussion about the idea of a forced labor import ban, how it should be constructed [and] what its aims should be, let alone any sort of structure for all of the different factual and legal determinations that go into the multi-step process.”

Kim Glas, president and CEO of the National Council of Textile Organizations, representing American textile businesses, for one, hopes to see more detentions. She’s likely to get her wish. CBP received \$101 million in fiscal year 2023 funding—a 108 percent increase over fiscal

year 2022 levels. This will help pay for an additional 300 UFLPA-enforcing positions.

“Part of our strong concern with our current de minimis trade structure is that it allows e-commerce products to come to our doorstep with such little scrutiny duty-free, can circumvent Section 301 tariffs and can contain Xinjiang cotton,” said Glas, referring to shipments that skirt import taxes because they fall under the \$800 threshold. “So what are we doing about those billion shipments that we’re seeing a year coming to the United States—and about half of those are textiles and apparel? And then in addition, what are all the activities that CBP has undertaken that really target the monumental impact forced labor has on the supply chain?”

Businesses should be seeing stopped containers off the port of L.A. on a “pretty regular basis,” she said, estimating that CBP is likely targeting between 30 to 40 percent of trade. There’s more room, to wit, for more effective enforcement.

“I think CBP has a very difficult job; Congress is basically saying, ‘We’re going to give you the resources to do that by hiring more officials and by having various testing technology available to you,’ but I would say it’s not going quickly enough,” Glas said. “I mean, clearly, these issues are still pervasive. Unfortunately, there

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are still horrific reports coming out of Xinjiang, and we need to be doing everything possible publicly and visibly showing the world that these supply chains are illegal.”

**Link**

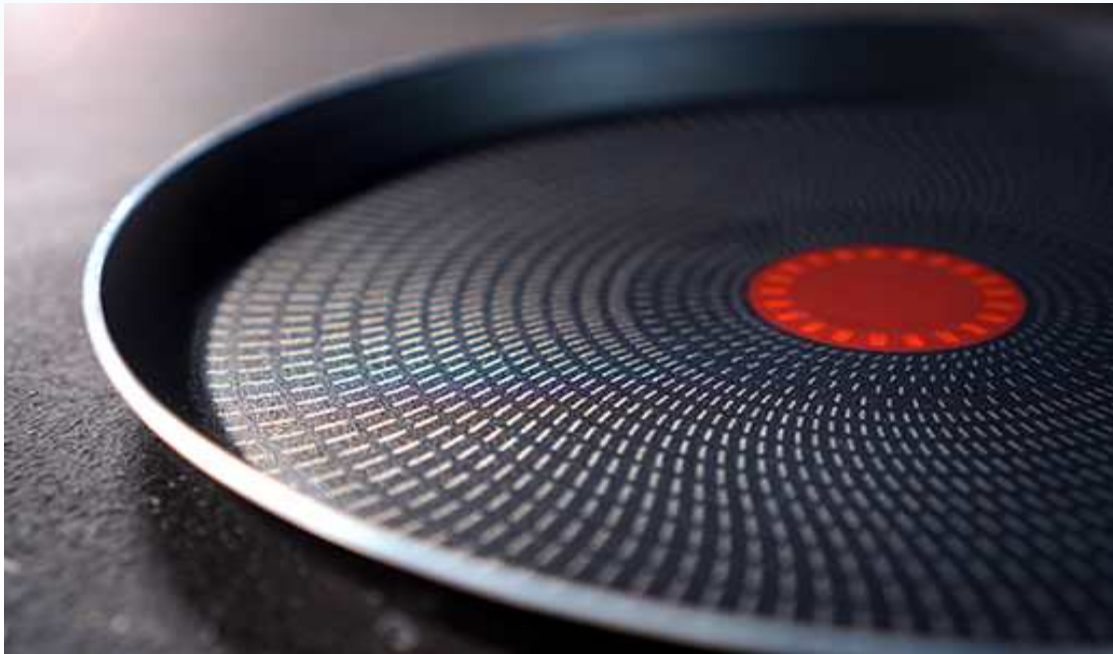
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## EU PFAS restriction proposal applicable to all uses of more than 10,000 substances

Two options give industry from 18 months to 12 years to transition



Echa has today published full details of the highly anticipated EU REACH restriction proposal that aims to place limits on all uses of more than 10,000 PFASs – significantly more than the 4,700 that had previously been identified.

The five European authorities that authored the Annex XV report – Denmark, Germany, the Netherlands, Norway and Sweden – have laid out two options on how to restrict the use and placing on the market (including import) of per- and polyfluoroalkyl substances.

Known as 'forever chemicals', PFASs are concerning because of their persistence, bioaccumulation and toxicity, and are widely found in humans and the environment.

Option one would be a "full ban" with no derogations and a transition period of 18 months after the Regulation enters into force.

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Option two – the dossier submitters' preferred choice – is a "full ban" with use-specific time-limited derogations that would carry an 18-month transition period and a five- or 12-year derogation period, depending on the application.

General time-unlimited derogations include use as:

- active substances in plant protection and biocidal products; and
- human and veterinary medicinal products.

The restriction report calls option two the most balanced way forward, leaving "room to mitigate unwanted effects to society due to the sudden unavailability of products for which alternatives are not yet in place and allows stakeholders and industry to prepare for a smooth transition to alternatives."

The Dutch National Institute for Public Health and the Environment (RIVM) said the proposal "sends a clear signal that companies need to seek alternatives to PFAS. In many cases, no such alternatives currently exist, and in some they possibly never will."

Frauke Averbeck, from Germany's Federal Institute for Occupational Safety and Health (Baua), told a press briefing that the "universal restriction proposal [...] is the broadest [...] that has ever been prepared and submitted. There are at least 10,000 PFASs that will be covered."

During their dossier preparation, the authorities embarked on extensive research on the substances, identifying over 5,000 more than the figure previously circulated in the EU. They also aligned with the OECD definition of PFASs that was published in 2021, which encompasses more than 10,000 PFASs, including a few fully degradable subgroups.

## **PFAS market sectors**

Approximately 230,000 tonnes of PFASs are placed on the EU market each year. The overarching sectors where they are used include:

- textiles;
- food contact materials;
- metal plating/metal products;
- consumer mixtures;

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- ski wax;
- applications of fluorinated gases;
- electronics and semiconductors;
- construction products;
- lubricants;
- petroleum and mining;
- medical devices;
- cosmetics; and
- firefighting foams (excluded from this proposal but subject to another).

## Transition periods

For consumer articles, such as non-stick cooking products, ski wax, cosmetics and cleaning agents, the authorities propose a ban after 18 months "because we know that, for instance, with food packaging, alternatives do work and are on the market," RIVM's Richard Luit said.

They regard a derogation period of five years as appropriate for cases where there is information that alternatives are under development but more time is needed, or they are not yet available in sufficient quantities. One example is industrial machinery used in the food industry.

A 12-year timeframe is for cases where there are no alternatives yet available and the identification and development will take time, Mr Luit said, giving the example of implantable medical devices, such as pacemakers.

He admitted that they are "not 100% sure we have covered all uses. There may be future uses – these are covered by the proposal, and these will be banned. When the restriction enters into force PFAS cannot be used any longer."

## Limits

Technically, there will not be a total ban on the chemicals under REACH. In their restriction report, the dossier submitters conclude that the following thresholds are feasible for PFASs on their own, in another substance, as a constituent, in mixtures or in articles placed on the market:

- 25ppb for any PFAS as measured with targeted PFAS analysis (polymeric PFASs excluded from quantification);

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- 250ppb for the sum of PFASs measured with targeted PFAS analysis, optionally with prior degradation of precursors (polymeric PFASs excluded from quantification); and
- 50ppm for PFASs (polymeric PFASs included). If total fluorine exceeds 50mg F/kg the manufacturer, importer or downstream user would upon request provide proof to the enforcement authorities of the fluorine measured as content of either PFASs or non-PFASs.

Beyond Europe, lawmakers in more than a dozen US states are planning further action on the substances this year.

### **Next steps**

At their March meetings, Echa's committees for socio-economic analysis and risk assessment (Seac and Rac) will undertake the legal checks on the proposal. If accepted, the following timetable is foreseen:

- 22 March: start of six-month consultation;
- 5 April: Echa information session;
- 2024: Rac and Seac final opinions;
- 2025: European Commission adoption and entry into force; and
- 2026-27: restriction becomes applicable.

### **Link**

<https://chemicalwatch.com/672000/eu-pfas-restriction-proposal-applicable-to-all-uses-of-more-than-10000-substances>

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