

LEVI STRAUSS & CO.

Progress on Commitment to Zero Discharge of Hazardous Chemicals

Levi Strauss & Co. is committed to responsible chemicals management and driving sustainable progress within the apparel industry. We were one of the first apparel companies to develop a [Restricted Substances List](#) (RSL), which establishes the chemicals we restrict in our manufacturing process. And, we were the first company to set U.S. Environmental Protection Agency (EPA)-level standards for the wastewater leaving our supplier factories, which we call our [Global Effluent Requirements](#).

In 2012, Levi Strauss & Co. advanced its commitment to chemical stewardship by joining the [Joint Roadmap Toward Zero Discharge of Hazardous Chemicals](#) (ZDHC Roadmap), an apparel industry collaboration to drive systemic change with a goal of zero discharge of hazardous chemicals by 2020. Such collaboration mirrors our belief that this collaborative approach to chemicals management is the most effective way to achieve the scope and scale necessary to meet the goal of zero discharge in the apparel industry. Read our commitment to zero discharge [here](#).

Also in 2012, Levi Strauss & Co. signed a [Detox Solution Commitment](#) with Greenpeace International, further outlining our commitment and actions toward zero discharge of hazardous chemicals. The following shares progress made since making these commitments.

Implementing a Hazard Assessment Methodology

Over the last four years, Levi Strauss & Co. has been implementing a hazard assessment methodology, called [Screened Chemistry Program](#), which examines chemicals used to manufacture our products against specific health and environmental impacts, allowing us to identify better alternatives and areas for innovation. The goal of the program is that all Levi Strauss & Co. suppliers will transition to using a preferred chemical list, using safer alternatives for manufacturing.

Ensuring the credibility and transparency of the program is a key objective, thus the program is based on the publicly available and transparent [U.S. EPA Safer Choice Program](#) and [GreenScreen® for Safer Chemicals](#).

We were honored to be named an [EPA Safer Choice Partner of the Year](#) in 2016 for our work to advance sustainable chemistry within our supply chain through our Screened Chemistry Program. In 2017, we were thrilled to be honored with the [Green Chemistry and Commerce Council's Champions Award](#) for our work to push for safer chemicals in apparel production.

The Screened Chemistry Program has been launched in approximately 40 percent of our laundries, and a total of 460 chemicals have been screened to date. In addition, the program has been recognized as a ZDHC Manufacturing Restricted Substances List (MRSL) conformance tool, and we are collaborating with several brands to implement it beyond our own supply chain.

Our goal is for Screened Chemistry to be recognized as an industry leading tool that identifies chemicals of concern (beyond RSL/MRSL listed chemicals) and helps to identify best in class chemicals and safer alternatives.

To learn more about the Screened Chemistry Program, please read the University of California Berkeley Haas School of Business case study titled "[Levi Strauss & Co.: Driving Adoption of Green Chemistry](#)."

Restricted Substances Stewardship

In 2014, we launched the [Restricted Substances Stewardship Program](#) (RSSP), which seeks to eliminate priority substances from suppliers' production processes, including production for other brands. The RSSP is a chemical management plan to restrict priority substance use and discharge, and help ensure a safe and healthful workplace.

With the RSSP, Levi Strauss & Co. requires supplier factories to accord high priority to responsible chemical management. Our suppliers are required to work closely with chemical suppliers and analytical laboratories, so that sound management migrates up the supply chain and that we are able to validate the results of implementation. Transparency is an important tool in keeping all stakeholders accountable.

Since 2015, we have focused on implementing the program with suppliers and aligning the RSSP with the ZDHC MRSL. We also have focused on utilizing other tools and trainings developed within the ZDHC Roadmap. We believe in industry collaboration to bring scale and scope to our commitment to zero discharge of hazardous chemicals.

Levi Strauss & Co. has made it a business requirement for each supplier factory to have a dedicated technical representative for the chemical management at the facility. The technical representative must be empowered and have sufficient budget to improve the chemical management systems of the factory. We require the technical representatives to participate in our on-line tool for chemical management systems and MRSL trainings.

Additionally, Levi Strauss & Co. invites our suppliers to participate in the ZDHC training programs. We provide on-site trainings conducted by our chemical management experts.

The goal is that through our supplier technical representatives, suppliers should have technical support available at all times to address problems and ensure compliance. Levi Strauss & Co. checks on RSSP performance and status of compliance quarterly, but we are planning to apply monthly check-ins in 2018.

Alkylphenol ethoxylates (APEOs)

Levi Strauss & Co. began focusing on phasing out APEOs in 2008 — long before our most recent commitment to extending a usage ban throughout our supply chain. Our 2008 RSL listed APEOs as a substance identified for phase out, requiring manufacturing suppliers to assess the scope of their usage within their own supply chains.

The elimination of APEOs across our supply chain is a key success metric for Levi Strauss & Co.'s individual action plan toward zero discharge of hazardous chemicals. Levi Strauss & Co. is sourcing from about 540 facilities in 26 countries globally, so this is a significant commitment and a challenge to ensure compliance and understanding by suppliers when the regulatory environment in all these countries does not align with our prohibition on APEO use.

We understand that there are multiple supply chain pathways for potential APEO contamination (including process, maintenance, on-site laboratory, sanitation, pest control and chemical wastewater treatment). We are committed to enhancing both training and auditing of our supply chain to ensure our suppliers have the latest information on APEOs, highlighting where there is a risk that APEOs may

enter into the undocumented contamination of chemical supplier formulations. In [this report](#), we are sharing the baseline findings from Levi Strauss & Co.'s phase out of APEOs in our supply chain.

In 2015, at our request, 83 finishing suppliers and 20 textile mills supplying Levi Strauss & Co. contacted all of their chemical suppliers to remind them of the APEO phase out. We also reinforced the APEO ban with all our licensees and provided training to 59 suppliers globally.

In 2017, we tested wastewater discharge from suppliers representing 80 percent of our production volume. We are encouraging testing labs to improve their facilities and make investments to ensure they are capable of testing for APEO everywhere we have suppliers.

Perfluorinated compounds (PFCs)

As of January 1, 2016, Levi Strauss & Co. stopped producing products with any perfluorinated compounds (PFCs) – chemicals that have unique properties to make materials waterproof and stain resistant. Our PFC-free policy is significant, especially considering that there are currently no equally effective alternatives to PFCs. Previously, we had eliminated the use of long-chain PFCs (C8) in our products, but as of the end of 2015, we have in place a prohibition on the use of all PFCs in the manufacture of our products.

In addition, Levi Strauss & Co. has mapped the mills supplying fabric that are completely free of PFC applications with those mills that still continue PFC production for other brands. We have a preference to allocate volumes to completely PFC-free mills wherever it is possible. Currently, 85 percent of mills supplying for Levi Strauss & Co. are completely PFC-free.

Levi Strauss & Co. published a [PFC Substitution Case Study](#) in May 2016 on the [SubSport website](#).

Phthalates

Levi Strauss & Co. included a restriction on the use of phthalates in its RSL back in 2000 and has had a usage ban in place since 2010, which is further addressed throughout our MRSL. Our attention to phthalates and commitment to elimination in our products globally preceded our joining the ZDHC Roadmap and Greenpeace Detox Solutions Commitment. However, through our collaboration in the ZDHC Roadmap, we have a better opportunity to expand and ensure implementation.

In 2015, 100 percent of Levi Strauss & Co. print suppliers (59 total) were determined to be free of phthalates usage at their facilities. We continue to remind our suppliers of our phthalates usage ban and work with them on systems for responsible chemicals management.

Potassium permanganate

In February 2018, we announced Project F.L.X. (future-led execution), a new operating model that digitizes denim finish design and development, and enables a responsive and sustainable supply chain. By replacing manual techniques and automating the jeans finishing process, we are able to eliminate thousands of chemical formulations from jeans finishing.

Project F.L.X. is a major step forward in Levi Strauss & Co.'s commitment to achieving [zero discharge of hazardous chemicals by 2020](#). It accelerates the elimination of many chemical formulations that the company's [Screened Chemistry](#) program identified as "phase outs." Project F.L.X. eliminates up to 90 percent of chemical formulations used in jeans finishing – from thousands of chemical formulations to a few dozen chemicals in the denim finishing process.

Through Project F.L.X., Levi Strauss & Co. will phase out of the use of potassium permanganate, a chemical oxidizer that is used to accentuate worn, faded design elements on denim to achieve authentic-looking finishes. We are no longer developing products with potassium permanganate spray, and our plan is to fully eliminate potassium permanganate from our supply chain.

Research and Disclosure

As part of our commitment to zero discharge of hazardous chemicals, Levi Strauss & Co. performed a benchmark study of chemical use and discharge in 2013. The study involved 11 priority groups of chemicals from a total of 41 supplier facilities located in key production markets (i.e., Mexico, China, India, Bangladesh, Cambodia, Sri Lanka, Pakistan, Vietnam, Egypt, Nicaragua and Lesotho).

The results helped Levi Strauss & Co. to establish a baseline understanding of chemical use and discharge, allowing us to focus on capacity building, process change, and policy change with suppliers toward the goal of zero discharge of hazardous chemicals in the apparel industry. It also helped us understand how to organize and improve supplier transparency. You can find the 25 supplier facility reports on chemical use and discharge from December 2013 [here](#). The previous 16 reports can be found [here](#). Several of these suppliers have also posted their data on the [IPE Detox Platform](#).

Since 2014, Levi Strauss & Co. suppliers have been reporting wastewater discharge testing results on the IPE Detox Platform. Starting in 2018, Levi Strauss & Co. will follow the ZDHC Wastewater Guidelines and publish wastewater data reports bi-annually in April and October each year.

The wastewater discharge reporting represents 80 percent of the wet processing in Levi Strauss & Co.'s supply chain. We are following up with all supplier facilities to outline actions to be taken by the facility to meet the goal of zero discharge of hazardous chemicals.

We are proud that our effort to improve sustainability, chemicals management, and disclosure with Chinese suppliers was recognized by the Institute of Public and Environmental Affairs (IPE), the Chinese environmental nongovernmental organization, in its [2017 Corporate Information Transparency Index \(CITI\)](#). The Index measures the performance of more than 248 brands across 14 industries in terms of how brands manage environmental performance in their supply chain in China. Levi Strauss & Co. was the top-ranking apparel company in the CITI, ranking first in the apparel industry and third across all industries. We were judged as the best out of 65 textile companies, including many of the big brand names. We have made great progress, increasing in rank from second in the apparel industry in 2016, up from third place in 2015.

Industry collaboration through ZDHC Roadmap

Levi Strauss & Co. is an active member of the [ZDHC Roadmap](#), working in collaboration with other industry leaders and suppliers to achieve zero discharge of hazardous chemicals in the apparel supply chain. We firmly believe that by combining efforts with ZDHC, we will be able to create more sustainable change and eliminate hazardous chemical use and improve water quality across the industry. In an effort to raise wastewater standards across the industry, we also worked with ZDHC to integrate Levi Strauss & Co.'s industry-leading Global Effluent Requirements into the [ZDHC Wastewater Guidelines](#).