



## PROGRESS REPORT ON CHEMICAL MANAGEMENT

SUMMARY APRIL 2018

The information below provides an update on adidas' progress against essential chemical management goals and targets that have been set and communicated to the public.

### 1. GOAL/ TARGET: THE PUBLIC'S RIGHT TO KNOW (DISCLOSURE)

We will deliver on full transparency of hazardous chemical use in our global supply chain. We will deliver public reporting of hazardous chemical use, starting with

- i. at least 99% of all 'wet processes' for China-based suppliers by no later than 31 December 2014 via the IPE Detox platform,
- ii. at least 50% of all wet processes across our global supply chain by no later than 31 December 2015 via the IPE Detox platform;
- iii. and at least 80% of all wet processes across our global supply chain by no later than 1 July 2016 via the [IPE Detox platform](#).

We will ensure full details of all wet processes across our global supply chain are always publicly available.

### PROGRESS/ ACHIEVEMENT TO DATE

#### i. Disclosure on IPE DETOX

From 2014 onwards, all major China-based wet process suppliers (who account for approx. 99% of the total material volume sourced in China) disclosed their wastewater data on the IPE Detox platform. The disclosure is not limited to wastewater data information from facilities, we also encourage our suppliers to include information on their respective customers during their disclosure.

In 2015 and 2016, we expanded our disclosure work and supported our suppliers in the disclosure of their wastewater data on the IPE platform. Since the end of 2015, 50% of our global wet processes by volume across footwear, apparel and accessories & gear have been disclosed on the IPE platform. We were able to have 80% of the suppliers' wastewater data disclosed by September 2016.

Since the end of 2017, suppliers accounting for at least 80% of our global wet processes by volume across footwear, apparel and accessories & gear have been disclosed on the IPE platform. The suppliers disclosed on IPE are located in China, Vietnam, Taiwan, Thailand, Cambodia, Indonesia, India, Pakistan, Korea, Japan and Turkey.

## ii. **Beyond DETOX - Disclosure on IPE PRTR (Pollutant release and transfer registers)**

Since 2011, we have screened our China-based factories on the IPE environmental violation record database. If suppliers are listed, we take action and support them in their remediation plan with the ultimate goal to get them removed from the blacklist.

We see that full transparency on the environmental performance in our supply chain is a fundamental step to reduce our environmental footprint. We encourage our suppliers that disclosure should not be limited to wastewater (e.g. air emission data on the IPE PRTR platform as well). Since 2015 onwards, all our strategic suppliers based in China have disclosed their environmental data on the IPE PRTR platform.

In the latest IPE report '[Greening the Supply Chain](#)' issued in 2017, adidas ranked as #1 in the Corporate Information Transparency Index (CITI) in the apparel and footwear industry. This is the third year in a row adidas was classified as a leader and it gives us external recognition for our global environmental program.

## iii. **Global Supplier list**

In order to further enhance transparency for all our stakeholders, we have expanded our publicly available supplier list with the strategic T2 wet process suppliers since 2014. It is shared on our website ([T2 wet process supplier list](#)).

### Detox protocol/findings to date

The vast majority of Detox priority chemicals have either been used in production processes unintentionally (as part of auxiliaries and dyestuffs) or have been effectively removed in wastewater treatment processes, as test results are mostly ND (not detectable). Those chemicals include: phthalates, brominated and chlorinated flame retardants, azo dyes, organotin compounds, chlorinated solvents, chlorophenols, SCCPs, heavy metals (lead, mercury, chromium (VI)), cyanide and APEOs/NPEs. Some heavy metals have been detected at levels significantly lower than the applicable national standards in treated wastewater, including cadmium, antimony, arsenic, chromium (total), cobalt, copper, nickel, zinc and manganese. Not all heavy metals have come from production materials. Some of the heavy metals, such as manganese and zinc, have probably been introduced from incoming water. Antimony is used as a catalyst in the polyester polymerisation process, and, as reported, an economically viable alternative is not yet available.

## **2016 – ZDHC Wastewater Guideline Development**

In 2016, we contributed to the development of the ZDHC (Zero Discharge of Hazardous Chemicals) Wastewater Guidelines, which were officially released in November 2016. This document provides an international wastewater standard with the goal to harmonise the process, sampling, test methods and TLVs ([ZDHC Wastewater Guidelines](#)).

In order to confirm the effectiveness of our holistic chemical management programme, we piloted testing of wastewater intake prior to the wastewater treatment process, as well as

sludge. By comparing the results from wastewater tests before and after treatment, we found that detected substances were at similar levels (results in the ppb range), but a regular trend between the two results could not be identified, because it is not possible to ensure that the wastewater before and after treatment derive from the same production batch. Most samples showed a non-detectable test result for measurements both before and after wastewater treatment. At the same time, we could see some examples where the detected concentration of a Detox priority chemical after wastewater treatment exceeded the concentration of the test result before wastewater treatment. (Chlorophenols before treatment: ND; after treatment: 0.0017 ppm. Lead before treatment: 0.002 ppm; after treatment: 0.004 ppm.) Our clear target is to reduce these very small amounts of Detox priority chemicals, most probably used unintentionally, until we achieve non-detectable results in all of our wastewater tests. The sludge test results show consistency with the wastewater results, because substances accumulate in sludge after effluent treatment.

### **2017- Adopting the industry standard and going beyond legal requirements**

To continue with the elimination of hazardous chemicals from the production processes, we strengthened our wastewater monitoring approach in our supply chain by adopting the ZDHC Wastewater Guidelines. In 2017, all our strategic suppliers have been required to test their wastewater according to the ZDHC Wastewater Guidelines twice a year. All wastewater test results have to be disclosed on the IPE DETOX platform and the ZDHC Gateway platform.

According to the latest wastewater test results, the majority of our facilities meets the local legislation or the requirements of the wastewater treatment plant. However, suppliers face challenges in fulfilling the aspirational level of the ZDHC Wastewater Guidelines by 2020. We are now closely working with our suppliers to develop and implement corrective action/remediation plans to close the gap as soon as possible.

### **2018 and beyond**

As part of our global stakeholder engagement strategy, we are continuously collaborating with different trade associations and industry federations/groups, including the China National Textile & Apparel Council (CNTAC) and the ZDHC, in order to discuss current standards and future trends in chemical management.

## **2. GOAL/ TARGET: PFC ELIMINATION**

As adidas is fully implementing the precautionary principle, we publicly committed to eliminating all long-chain (i.e. C7, C8 and longer) PFCs (defined as all poly- and perfluorinated substances and their precursors and metabolites) by no later than 1 January 2015 (across all products we produce or sell globally). The elimination of all PFCs used in any of the products we sell will be supported by the following next steps:

- i. adidas has committed to being 90% PFC-free as of 15 June 2014;
- ii. adidas has committed to eliminating any other PFCs in any of the products adidas produces and/or sells across its global supply chain, and to be at least 99% PFC-free by no later than 31 December 2017;
- iii. full, public and detailed disclosure on our main public website of all PFC use by no later than 31 December 2017;
- iv. documentation of how PFCs have been substituted with safer alternatives and publication of these case studies via the online Subsport.org platform;
- v. implementation of a rigorous system of control to ensure that no traces of PFCs find their way into our supply chain in line with the above;
- vi. working in partnership with our supply chain and other global industry leaders to accelerate the move to non-PFC technologies.

## **PROGRESS/ ACHIEVEMENT TO DATE**

In 2016, we have successfully built in-depth chemical expertise in our teams and strengthened our research capacities for finding PFC alternatives which meet our high performance and quality standards for apparel, footwear and sporting goods providing water repellency. We are constantly and carefully testing alternative concepts to achieve our commitment and provide the best products to our consumers. We also work in close collaboration with leading chemical companies to explore formulations which are still in the R&D phase.

However, the transition to PFC-free finished products continues to cause challenges, taking into consideration our diverse product portfolio in footwear, apparel and accessories, and our global supply chain.

During the initial R&D phase, we found performance differences in lab vs. wear tests. Therefore, we had to adjust our overall testing procedure. At the same time, we also detected differences in the performance of the same PFC-free solution from one supplier to another. With the support of our in-house production specialists from the manufacturing excellence team, these initial application issues have been solved.

We also realised that, due to the newness of certain alternatives, application processes had to be adjusted significantly. With our technical team, we supported our material suppliers in adjusting key production processes and applied them across the supply chain.

Through our research and innovation efforts, we have achieved significant progress towards developing PFC-free water-repellent materials which meet our standards for many of our product types, in order to provide consumers with water-repellent equipment for apparel, footwear and sporting goods.

We have been successful in applying PFC-free solutions as water-repellent finishes to many different end uses, especially in lifestyle and entry-level performance products. We now have 44 approved PFC-free solutions.

At the same time, extensive training and education efforts have been undertaken internally with our product development teams and with our suppliers to ensure that water-repellent chemistry and PFCs are only used as exceptions, when it is absolutely necessary to achieve the highest performance level. See also our website: [The chemistry must be right](#).

As there are no global standards to define 'PFC-free', we have created and implemented an adidas PFC-free policy:

- It summarises the most up-to-date findings of our research work and describes a sophisticated procedure to ensure compliance with our PFC-free programme and eliminates the intentional use of PFCs. The policy covers the full supply chain, end to end: from input chemistry to production through to the final product.
- We have engaged with universities, leading testing laboratories and many other stakeholders to identify the right tests in the right place to ensure compliance throughout our supply chain.
- The policy provides an approved list of formulations to be used by all adidas suppliers as well as an approved list of suppliers who meet our requirements to produce PFC-free products.

We have been testing not only the newly developed materials on their content of fluorinated compounds, but also established smart end-to-end testing: every PFC-free formulation that is used to produce the water-repellent materials is tested. This test for fluorinated compounds is also applied to every newly developed material containing water-repellent treatments, as well as to finished garments using a random-test approach. Overall we carried out more than 1300 tests.

In our continuous efforts to create further transparency in our supply chain, we also detected PFCs in processes where we did not expect to. One area is the manufacturing of some of our PU synthetics which are used in a wide range of our footwear materials. By working closely with our suppliers, we have been able to eliminate the use of PFCs for these applications.

All these steps and achievements have been crucial to successfully achieve our PFC-free commitment which we gave in 2013. By the end of 2017, 99.3% of our products are PFC-free.

### **Beyond 2017**

- We will continue in upholding our previous commitment and related efforts in maintaining our success of more than 99% of our products sold being PFC-free. This includes the continuous improvement of the performance of our PFC-free products.
- We will report on the current status of our PFC-free product share on a yearly basis.

- For high end-performance products we will be proactively searching for suitable alternatives in close collaboration with academia and thought leaders with profound technical expertise. This includes our continued work with with Gore™.
- We will continue to raise our voice as an industry leader and share key findings of our PFC-free approach with the industry through conference presentations and through sharing best practices.

### 3. **SUCCESS STORY: SUBSTITUTION OF PFCs FROM THE PRODUCTION PROCESS OF POLYURETHANE-BASED LEATHER**

As a key supplier for adidas, Baiksan Co., Ltd. fully supported our approach of implementing the precautionary principle by eliminating all PFCs (defined as all poly- and perfluorinated alkyl substances and their precursors and metabolites) by no later than 31 December 2017 (across all products adidas produces or sells globally). To the best of our knowledge Baiksan has been the first company that identified the use of PFCs in “unexpected” areas, which is the use of PFCs during the production of PU-based synthetic leather to avoid unevenness of coated material in this success story.

Due to the fact that this substitution was developed for DMFA-based (Dimethylformamide) PU-based synthetic leather it contains some DMFA and could therefore not been accepted by Subsport.

Baiksan is using the PFC-free chemistry for two reasons: to provide water repellent and/or waterproof (DWR/WPN) properties on the final material (wet processed synthetic leather) and to avoid unevennesses (e. g. air-bubbles) on the surface of the PU-coated synthetic leather.

On their transition to PFC-free PU production processes they had some key learnings:

- During the initial R&D phase, Baiksan found performance differences in the performance of the PFC-free solutions from the respective chemical suppliers. With the support of their in-house production specialists these initial application issues have been solved. After many tests the formulation Lofec A-750 from the Korean chemical supplier Nuri Industry worked best for their products.
- They also realised that the application processes had to be adjusted significantly due to the fact that they have been optimized for PFC-containing solutions. With their technical team, they have been able to adjust key production processes and applied them successfully.
- Optimization and fine-tuning of the process parameters to meet the adidas performance requirements and to comply with the adidas PFC-free policy took some time and effort, but in the meanwhile they are successfully producing wet-processed synthetic leather without any PFCs.

## **4. COMMUNICATION WITH SUPPLIERS AND CAPACITY BUILDING**

We see the need for pragmatic and implementable chemical management tools for our suppliers that can be used to efficiently reduce the environmental footprint as occurred in our supply chain. As one of the committed brands to eliminate the discharge of hazardous chemicals, we work closely with our supply chain partners to make sure that best practices and the existing chemical management tools are truly implemented.

### **PROGRESS/ ACHIEVEMENT TO DATE**

#### **2014: Chemical Management Guideline (CMG)**

Alongside our audit programme, we developed in 2014 an innovative capacity-building programme for suppliers, called the Chemical Management Guideline (CMG). The guideline was developed in close collaboration with the chemical company Huntsman Textile Effects, who contributed their extensive expertise in chemical management at textile mills. Workshops were conducted by Huntsman across all strategic apparel material suppliers in order to train them on this new tool and approach.

Over 450 people from 49 of our strategic apparel suppliers (including 21 trims suppliers) in eight countries have undergone CMG training. Firstly, this strengthened their overall knowledge on how to record, understand and monitor the chemical inventory as well as on the safe handling of chemical products from storage to use and, ultimately, disposal. And secondly, they have cascaded this knowledge to their internal colleagues. This has led to an important and efficient multiplier effect. The training will also help suppliers to avoid contamination at mill level and is applied to all their production lines.

#### **2016: Program refinement and strengthening the industry collaboration**

To assist suppliers to continuously enhance their chemical management programme, we refined our training on the Chemical Management Guideline e. g. by including previous audit findings & best practices.

We continued to further strengthen our global environmental supplier programme. One of the key elements of this programme is a tailored audit of T1 and T2 suppliers. The audit programme is designed to measure the performance of the suppliers and to support their improvement. The applied method for our T2 audits is the ZDHC audit protocol 2.0, which was developed with a specific focus on chemical management. Overall, we conducted over 140 environmental audits.

In November 2016, we hosted an adidas supplier workshop in Shanghai to which we invited more than 20 of our strategic T2 and T3 suppliers, as well as some of our key collaboration partners, with the goal to reiterate and clarify our direction and guidance. This tailored engagement is critical to further strengthening our chemical management program. A keynote was delivered by adidas at the annual ZDHC/CNTAC conference in which the

importance of sound chemical management practices was stressed. More than 700 participants attended.

Additionally, together with our suppliers, we have re-iterated our commitment to phase out PFCs and to further improve our global chemical footprint and transparency at several public-facing conferences and supplier events around the world. As a major player in the sporting goods industry, we truly believe that our commitments and holistic chemical management programme will lead to changes in the entire footwear and apparel industry. See [2016 Sustainability Progress Report](#) and [ECHA Guest Column](#).

## **2017: Continuous industry engagement: Harmonization of the ZDHC audit protocol with SAC HIGG FEM 3.0**

The industry-wide alignment on an assessment protocol for the chemical management is a significant step forward to drive best practice implementation at the suppliers. We have been heavily involved in the development and harmonization process on the chemical management audit protocol from the Facility Environmental Module (FEM) 3.0, which was officially released in 2018 by the Sustainable Apparel Coalition (SAC). The implementation of a standardized and harmonized assessment tool in the industry enables a consistent evaluation on suppliers chemical management performance across the value chain.

## **5. CHEMICAL INPUT MANAGEMENT: bluesign AND MRSL**

### **PROGRESS/ ACHIEVEMENT TO DATE**

In 2016, we further strengthened our focus on chemical input management. As part of our partnership with bluesign, we continued to record the chemical inventory of our strategic apparel material suppliers and started to set targets for the use of bluesign-approved chemicals. They are actively using the bluesign® bluefinder positive chemistry database in their day-to-day chemical selection. The ease of use of this simple tool accelerates the use of more sustainable chemistry significantly. The bluesign® bluefinder tool is based on the strict bluesign systems substances list ([BSSL](#)).

We met our 2017 target '50% of auxiliaries and 80% of dyestuffs to be bluesign-approved'. The suppliers actually exceeded this target: 56% of auxiliaries and 83% of dyestuffs are now bluesign-approved. Looking forward, our 2018 targets for our strategic apparel material suppliers are: 72% of auxiliaries and 86% of dyestuffs becoming bluesign approved.

The chemical inventory of those suppliers who produce more than 85% of our apparel material volume was recorded twice in 2017, in order to monitor their progress. The chemical inventory was recorded and monitored for the full production volumes of the suppliers.



Additionally, we further collaborated with the ZDHC organisation and have contributed to the first industry-wide Manufacturing Restricted Substances List (MRSL), an important breakthrough in the industry. In 2015, the MRSL was further extended to cover leather processes and will be continuously updated by an expert group. The MRSL is a strong base for the industry to start managing the chemical input in a harmonised manner.

In 2016 and 2017, we contributed to the MRSL Conformance Guidance, a highly sophisticated document that aims to support the implementation of the ZDHC-MRSL, which was released in June 2017. In 2017 we continued our efforts by contributing to the development of a transparent and credible MRSL update process precisely described in the “Updating the MRSL – Principles & Procedures” guidance document, that will be released early 2018.

We have started to implement the ZDHC-MRSL and have set it as a basic expectation for our suppliers. The communication, supported by adidas internal hands-on guidance documents, was released to all T2 wet process suppliers in July 2016. In 2017 we have collected signed ZDHC-MRSL acknowledgement letters from our T2 wet process suppliers (in total more than 290 suppliers). We are currently working on an advanced MRSL implementation plan in order to strengthen our input management programme over next years. [ZDHC MRSL](#)

You will find more information about our comprehensive chemical management programme on our website: [Chemical Footprint](#) and [A partnership with good chemistry](#).