

G-STAR RAW

G-STAR ZERO DISCHARGE OF HAZARDOUS CHEMICALS
PROGRESS REPORT 2013 ON G-STAR INDIVIDUAL ACTION PLAN

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1. INTRODUCTION

G-Star works actively to prevent the use of chemicals in our products or production processes that can have a harmful effect on health or the environment.

The basis of our Responsible Supply Chain policy is the G-Star Supplier Code of Conduct (CoC) that clarifies and elevates the expectations we have of suppliers we work with and lays down the minimum Social and Environmental, Health & Safety (EHS) standards we expect each factory to meet. The CoC refers to the G-Star Restricted Substances List (RSL) as the basis for monitoring the use of chemicals in G-Star products.

In January 2012, G-Star committed to reach zero discharge of hazardous chemicals (ZDHC) from all our products and production processes by 2020.

G-Star published a first action plan in 2012 that included all measures necessary to integrate this commitment into our business activities and work towards this target.

Since cooperation across the entire industry is essential, G-Star also joined the ZDHC Group in January 2012 to collaboratively work with a large number of world leading brands towards ZDHC by 2020. The ZDHC Group has set specific actions and timelines to realise this shared commitment and to set the right standard of environmental performance for the global apparel and footwear industry. G-Star supports and puts effort in the group's activities to collectively find safe substitutions for hazardous chemicals used in the apparel industry and work towards ZDHC by 2020. More information can be found on the ZDHC Joint Roadmap website: www.roadmaptozero.com.

In addition we became a system partner of bluesign technologies ag. We are committed to implement their bluesign® standard, an independent standard that guarantees our products are free of hazardous chemicals, in our supply chain.

By the end of January 2013 we reconfirmed our commitment by publically agreeing to the Greenpeace Detox Solution Commitment.

In January 2013 we published a first progress report that showed the progress made in 2012 in line with the G-Star action plan. In this 2013 progress report we give an overview of the progress made in 2013 towards our ZDHC target in line with our Detox Solution Commitment.

An updated Action Plan 2014 – 2020 will be published before the end of first quarter of 2014.

2. PROGRESS 2013 TOWARDS ZDHC

G-Star Supplier Code of Conduct

The G-Star Code of Conduct is a tool to ensure the G-Star products are made under fair and safe circumstances. The Code outlines the minimum social and environmental standards we expect each factory to meet and gives guidelines thereto.

Progress:

- An update of the G-Star Code of Conduct is expected to be published before the end of June 2014.
- Audits of our first tier suppliers and their subcontractors against our Code of Conduct are conducted at the factories in 2013 according to the SMETA methodology. The results will be published in the MADE-BY scorecard in 2014.
- Early 2013, after thorough research & piloting, four different environmental audit standards are selected to conduct environmental audits in line with our Code of Conduct. These are the SMETA 4 pillar audit, the Cleaner Production program assessments, the Bluesign assessment within the Bluesign program and the jointly developed ZDHC Generic Environmental Audit Protocol.
- During 2013 we started environmental auditing at our biggest suppliers that represent 63% of our production volume. In cooperation with the ZDHC group, G-Star has also conducted pilot audits with the first version of the ZDHC Generic Environmental Audit Protocol in Bangladesh and China. Based on the results of these audits, follow-up audits and action plans have been set up with the suppliers to work on their environmental compliance.
- In 2014 G-Star will continue to conduct environmental audits with the ZDHC Generic Environmental Audit Protocol in Bangladesh and China. In January 2014 the biggest Chinese supplier of G-Star has taken part in the ZDHC Pilot Chemical Management training. The training functions as a supporting tool for the ZDHC Generic Environmental Audit Protocol and will be rolled out in China and other production countries throughout the year.

Restricted Substances List

The basis for monitoring the use of chemicals in G-Star products is the G-Star Restricted Substances List (RSL). This list follows international laws and regulations, is public and updated frequently. Our textile engineers and chemical specialists work together with suppliers on proper use of chemicals and compliance with the RSL. To check compliance of our products with the RSL, we perform risk assessments, auditing and testing of our products.

As from January 2009 we also started to conduct screening of Substances of Very High Concern (SVHC) linked to the REACH legislation. This legislation is now an integral part of our RSL.

Progress

In line with our commitment to the public's 'right to know' the RSL is public and will be updated on a regular basis, at least once a year. In 2013 the list has been updated and extended and the new version was published in September 2013. Following the update our textile engineers and chemical specialists guide and train our suppliers to clarify the changes made in the updated RSL. In 2013 a team consisting of our chemical specialist and textile engineer visited our suppliers in India, Vietnam and Bangladesh to discuss our RSL update and testing methods and to give tailor made advice. Based on these visits, an action plan is being made together with our suppliers.

Manufacturing Restricted Substance List

In 2013 the investigation and drafting of a Manufacturing Restricted Substance list (MRSL) started by our team of chemical specialists and also in collaboration with other brand specialists within ZDHC group.

The MRSL will contain a list of chemical substances by CAS# that are subject to a usage ban in the manufacturing of materials, components and finished products, which include solvents, cleaners, adhesives, paints, inks, detergents, dyes, colorants, auxiliaries and finishing agents. The list shall be used by our suppliers when buying chemicals from chemical suppliers and the identification identifying and use of safe substitutions will enable us to make further steps towards ZDHC, e.g. no contamination of water effluent, and reducing water usage in production due to new sustainable chemicals. The expected publication of the MRSL is mid February 2014.

Together with the above tools we provide our suppliers the G-Star Matrix to give more information about the chemicals in G-Star's RSL. The matrix displays in which type of garments and which parts of the garment the risk of detecting these chemicals is the biggest; in fabrics (divided in synthetic or blended fibers, natural &

regenerated fibres, coated fibres and leather), lining & pocketing (divided in synthetic or blended fibers and natural & regenerated fibres), trims & accessories (divided in synthetic or blended fibers and natural & regenerated fibres, leather, metal and wood) and prints and embroideries. This tool gives guidance to our suppliers to prevent the use of hazardous chemicals in their production process.

Chemical Elimination

APEO elimination

In line with our commitment we recognize the intrinsic hazardousness of all APEO's, and acknowledge it is a priority to eliminate their use across our global supply chain. There are multiple supply chain pathways for potential APEO contamination (including chemical formulations) and we are committed to enhance both training and auditing of our supply chain in conjunction with other global brands, as well as 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.

Progress

- Early 2013, all our suppliers have received an email reminding them about G-Star's commitment to phase out APEOs/NPEs from our garments by the end of 2013 and we provided a 'positive list' of APEO/NPE-free detergents.
- Early 2013 we strengthened the testing program on this specific chemical group.
- We published a case study on Subsport, the substitution support portal, in March 2013 titled: [An alternative to APEO to reduce yellowing in polyamide, polyester and their blends with elastane fibers during heat-setting](#).
- During 2013 we investigated the level of compliance to the APEO ban, reporting the findings to the public by publishing a report in August 2013 on [APEO Elimination Policy](#).
- We strengthened our supplier contract language to ensure only APEO-free chemical formulations are utilized.
- We continue to stimulate our suppliers and any new suppliers to use APEO/NPEO free chemicals and implemented a system with checks & measurements to ensure our supply chain stays free of APEO/NPEO.

Perfluorinated/Polyfluorinated Compounds (PFC's) elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all PFCs, we are committed to eliminate any PFCs in any of the products G-Star produces and/or sells. We committed to eliminate all C7 and C8 (and any longer chain PFCs) and 50% of any shorter chain PFCs (baseline as of 31 December 2012) by no later than 31 December 2013; and eliminate any remaining PFC use by no later than 31 December 2014.

Progress

- We eliminated all long chain PFC's C7 and C8 by December 2013 and are investigating the performance of PFC free garments.
- End of December 2013 we published a case study on Subsport, the substitution support portal, titled: [Root cause investigation of PFOS contaminations in leather garments](#) explaining where PFOS was used in leather industry.

Phthalates elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all Phthalates, we acknowledge it is a priority to eliminate their use across our global supply chain. There are multiple supply-chain pathways for potential Phthalate contamination (including chemical formulations) and G-Star will enhance both training and auditing of our supply chain in conjunction with other global brands, as well as ensure our suppliers have the latest information on Phthalates that highlights where there is a risk that Phthalates may enter into the undocumented contamination of chemical supplier formulations.

Progress

- We published a case study on Subsport, the substitution support portal, in March 2013 titled: [An alternative to PVC and Phthalates in high density plasticol prints](#). The case study describes how PVC and phthalates are substituted by silicon prints.

- We investigated the compliance to the Phthalates ban and published our [Phthalates Elimination policy](#) on our website in September 2013.
- We strengthened our supplier contract language to ensure only Phthalate-free chemical formulations are utilized by the end of September 2013
- We continue to urge our suppliers and any new suppliers to use Phthalates free chemicals and implemented a system with checks and measurements to ensure our supply chain stays free of Phthalates.

Water discharge

In August 2013, G-Star published the [G-Star Water Discharge Report I](#). This report describes the results of water tests executed at our Asian suppliers accounting together for a minimum of 25% of our global production.

In December 2013, we have published the [G-Star Water Discharge Report II](#) showing the water discharge data of our suppliers accounting for a minimum of 80% of our global production. The results of these reports allow us to obtain an understanding of the use and discharge of the 11 priority chemicals throughout the production process and form a baseline assessment of the presence of the 11 priority chemicals in our supply chain.

We collected and tested water samples on the presence of the following 11 priority chemical groups:

1. Alkylphenols
2. Phthalates
3. Brominated and chlorinated flame retardants
4. Azo dyes
5. Organotin compounds
6. Perfluorinated chemicals
7. Chlorobenzenes
8. Chlorinated solvents
9. Chlorophenols
10. Short chain chlorinated paraffins
11. Heavy metals

The goals of the research of which the results are shown in the two reports are the following:

1. Do a baseline assessment of the quality of the water discharged by the factories where G-Star products or fabrics are produced.
2. Identify whether analytes from the 11 priority chemical classes are present in the water discharges at supplier locations and at what level.
3. Better insight in the chemical use in the production process at the factories and possible interrelation with chemicals after treatment of the water.
4. Formulate, prioritise and coordinate follow up activities with suppliers to reach our target.
5. To work towards zero discharge of hazardous chemicals by 2020.

As G-Star and all suppliers included in the two reports acknowledged the 'right to know principle', we encouraged and supported our suppliers to publicly disclose the water discharge data. The majority of our Chinese suppliers that are included in the baseline assessment agreed to disclose the water discharge data on the website of the Chinese Institute of Public & Environmental Affairs (IPE), a Pollutant Release and Transfer Register (PRTR) platform in China. Where our suppliers decided not to publicly disclose via the IPE website, we will continue to encourage and support them to do so.

Up till now, there is now proper platform for disclosure of discharge water for the suppliers outside China (Bangladesh, India and Vietnam). As soon as a proper platform for disclosure is available for those countries, the dialogue on disclosure of water discharge data will be continued. In those countries, the dialogue on disclosure of water discharge data will be continued.

The goal of the full research was to do a baseline assessment of the use and discharge of the 11 priority chemicals in G-Star's supply chain. From the assessment it is evident that further root cause investigation is necessary. Our Chemical Specialists are working from the very start of the production with the factories, not only from G-Star's side but also with bluesign technologies ag and the ZDHC Joint Roadmap. They check the use of chemical products, search for environmentally friendly substitutes for hazardous chemicals and work with suppliers towards phasing out harmful chemicals from their production processes.

It has also become evident that reaching the target of ZDHC by 2020 cannot be achieved alone; this is an industry effort. Looking at these results in the water discharge reports it can be noted that the input water plays part in the contamination of the water after treatment. This should be addressed together with all industry stakeholders.

And although the water testing was an important step of knowledge building, G-Star is aware that still many steps need to be taken to come to zero discharge of hazardous chemicals and understanding the contamination of water by chemicals.

3. FURTHER RESEARCH

Polyvinyl chloride (PVC)

The use of polyvinyl chloride (PVC) will be phased out of all G-Star products by January 1 2015.

Progress:

- During 2013 whenever PVC was detected in garments during our testing process that is within our RSL limits, we informed the supplier concerned about our commitment to phase out PVC and we offered them a 'positive ink list' since most PVC is used in prints and ask them to use these inks instead.
- We banned PVC in our RSL 1.0 in January 2012.
- During supplier visits, internal chemical experts give tailor made advice to suppliers on how to work PVC free and how to do a simple in-house test on their garments for traces of PVC.
- All Packaging materials such as polybags and shirt packaging are made PVC free in 2013.

By the end of 2013 we reached our goal to eliminate PVC far ahead of our deadline in 2015.

Polyurethane (PU)

G-Star will continue its investigation in replacing conventional polyurethane (PU) with water based alternatives and thereby provide an alternative to the use of dimethyl formamide (DMF)

Progress:

- We are in the process of implementing the use of water based alternatives for PU with appropriate quality for our products.

Leather

G-Star investigated the use of chemicals in its leather products and at the leather suppliers.

Progress:

- Leather is yearly less than 5% of our collection.
- In 2013 we investigated alternative solutions for ChrVI tanning and the limitation of hazardous chemicals used in production of leather.
- Via one of our chemical suppliers, we have developed further expertise on degreasing processes and are sharing this expertise within our supply chain.
- In December 2013 we published via Subsport, the substitution support portal, a PFOS case study on PFOS in leather.

Bleaching

Investigate methods to replace chlorine bleaching processes in denim production (e.g. with ozone bleaching, which does not require further chemical treatments or water consumption to achieve desired washing effects).

Progress:

- We continue our investigation in 2014 as the research and pilots in 2013 do not yet live up to our quality requirements.
- We continue to use Ozone treatment as a finishing on garments. Together with our suppliers we will continue to explore possibilities to use Ozone as bleaching agent to replace wet processing.
- Together with our suppliers we continue our trials on new bleaching possibilities that are Potassium permanganate free and bleach chlorine free.
- Suppliers continue to work on improving these bleaching possibilities and to reduce water consumption in this process.
- Colour fading with enzymes is also used in the G-Star collection to replace bleaching.

4. PARTNERSHIPS

ZDHC group of brands

In 2012 we joined the Joint Roadmap together with the brands adidas Group, C&A, Esprit, G-Star Raw, H&M, Inditex, Jack Wolfskin, Levi Strauss & Co., Li Ning, M&S, New Balance Athletic Shoe, Inc., NIKE, Inc., PUMA SE and PVH Corp. and made the joint commitment to help lead the industry towards Zero Discharge of Hazardous Chemicals (ZDHC).

For more information about the ZDHC group of brands and progress made in 2013, please visit the [ZDHC group website](#).

Bluesign

Early 2013 we have become a system partner of bluesign technologies ag, The declared objective of the independent bluesign® standard is to put a reliable and proactive tool at the disposal of the entire textile production chain – from raw material and component suppliers who manufacture e.g. yarns, dyes and additives, to textile manufacturers, to retailer and brand companies, to consumers. bluesign technologies ag has a database of several thousand dyes and chemicals that are controlled regarding hazardous chemicals, and can be used by G-Star and our suppliers to eliminate the nine priority chemicals. In addition, bluesign technologies ag has a database of bluesign® partner facilities with bluesign® certified products, to identify reliable partners in our supply chain.

Two significant G-Star CMT suppliers have become a bluesign® system partner, as are five trim suppliers G-Star works with. In 2014 we will expand our cooperation with bluesign technologies ag further in our supply chain.

Solidaridad

Cleaner Production Programme

We continued our programme with Solidaridad, an international non-profit network organisation with more than 20 years of experience in creating fair and sustainable supply chains, aimed to support 6 factories with in-house textile dyeing and finishing activities by implementing environmental improvements. This programme includes cleaner production training, environmental assessments and implementation support.

Progress:

- The cleaner production programme has started in 2012 at three of our biggest suppliers in China.
- In 2013, it has expanded to one of our biggest vertical integrated suppliers in Bangladesh. The initial assessments are executed and implementation of better practices has started.
- In 2014 the Cleaner Production Program in Bangladesh will be incorporated in the the WaterPaCT program.

WaterPaCT program

In 2013 G-Star joined the WaterPaCT Programme with Solidaridad and the International Finance Corporation in Bangladesh. The WaterPaCT Programme is an extension of the Cleaner Production Programme in Bangladesh. The goal of WaterPaCT is to reach a reduction of water and energy consumption, improved chemical management, reduction of wastewater generation, improved water quality, and improved Water, Sanitation and Hygiene (WASH) conditions. The programme has a proposed lead time of 4 years and the majority of the G-Star suppliers in Bangladesh will participate.

Currently, all suppliers that G-Star works with in Bangladesh are either a Bluesign member or participate in the WaterPaCT programme.

Textile Exchange

We aim to gradually increase the use of sustainable materials (i.e. organic cotton, recycled cotton, Tencel) in our products.

Since 2010 G-Star is an active partner of the Textile Exchange, an industry-led non-profit organization committed to the responsible expansion of textile sustainability across the global textile value chains, to accelerate the use of sustainable materials and environmentally friendly technologies.

Progress:

- As part of G-Star's partnership with Textile Exchange, G-Star visited the Textile Exchange Sustainable Textile Conference and the Textile Exchange Organic Cotton Roundtable in November 2013. Textile

Exchange continues to support us in our ambition to increase the use of sustainable materials in our collection with its knowledge base, trainings and workshops.

- Participation in the 'Sustainable Business Models for Organic Cotton' task force that aims to build a flourishing organic cotton market that benefits all; from farmer to consumer.
- We continued dialogue with our supply base to find more sustainable fibre alternatives and increase the use of certified sustainable materials in our collection. The progress made over 2013 will be published in our MADE-BY scorecard in May 2014.

MADE BY

Since March 2011 G-Star has entered into a partnership with MADE-BY. This multi-stakeholder organisation supports brands in implementing strategies to improve environmental and social conditions in the fashion industry. MADE-BY verifies the implementation of G-Star's Corporate Responsibility policy and transparently monitors progress on the working conditions in the factories that manufacture our products and the use of sustainable materials in our collections.

Progress:

- Our social and environmental progress is published year-on-year by way of a Scorecard. The scorecard system measures, benchmarks and tracks G-Star's year-on-year progress on social standards in the supply chain and on the environmental impact of materials used in their products.
- The first MADE-BY scorecard of G-Star has been published mid-2013 and can be found on the [MADE-BY website](#).

