G-STAR RAW

G-STAR ZERO DISCHARGE OF HAZARDOUS CHEMICALS PROGRESS REPORT 2015 on our Detox Commitment

April 2016



DENIM 3301

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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. Following our commitment we 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 Group's Joint Roadmap website: www.roadmaptozero.com.

In addition, early 2013 we became a system partner of bluesign technologies ag . We are implementing their bluesign® standard. This is an independent standard that guarantees that products are free of hazardous chemicals.

By the end of January 2013 we reconfirmed our commitment by publically agreeing to the <u>Greenpeace Detox</u> <u>Solution Commitment</u>. In 2014 our Detox Strategy explained further steps towards zero discharge of hazardous chemicals and going forward we have integrated our detox strategy in our overall Corporate Responsibility strategy towards 2020.

To transparently report on our progress towards zero discharge of hazardous chemicals in 2020, by the end of each year we publish a progress report to show the progress made in line with our Detox Solution Commitment, our environmental strategy to reach zero discharge and ZDHC goals.



2. PROGRESS TOWARDS ZDHC IN 2020

2015 detox reporting





1. January 2012

G-Star joins the ZDHC Group together with other brands and retailers that made the joint commitment to lead the industry towards zero discharge Go to: ZDHC Group website

2. January 2013

G-Star signs DETOX Commitment with Greenpeace and commits to eliminate hazardous chemicals from its supply chain

Go to: Greenpeace Detox Solution Commitment

March 2013

G-Star announces partnership with Bluesign® Go to: Bluesign® website

4. March 2013

G-Star published a substitution case study on Subsport; An alternative to APEO to reduce yellowing Go to: An alternative to APEO to reduce yellowing

5. March 2013

G-Star published a substitution case study on Subsport; An alternative to PVC and Phthalate in high density plastisol prints

Go to: An alternative to PVC and Phthalate in high density plastisol prints

6. August 2013

APEO-free formulations are implemented Go to: Report on APEO Elimination Policy

7. August 2013

G-Star publishes its Water Discharge Report I Go to: Water Discharge Report 1

8. September 2013

Utilization of Phthalate-free chemistry for all our garments and accessories in order to constantly control and guarantee that hazard free alternatives are used Go to: Report on Phthalates Elimination Policy

9. September 2013

G-Star published a substitution case study on Subsport; Root cause investigation of PFOS contamination in leather garments

Go to: Root cause investigation of PFOS contamination in leather garments

10. September 2013

G-Star carried out environmental pilot audits in liaison with the ZDHC group Go to: ZDHC Audit Protocol Report 2014

11. December 2013

G-Star publishes its Water Discharge Report II Go to: Water Discharge Report 2

12. June 2014

G-Star publishes map with manufacturing locations where our products are made Go to: Manufacturing Map

13. October 2014

The G-Star MRSL is published and implemented at all direct suppliers and washing facilities Go to: G-Star MRSL

14. January 2015

All durable water repellent chemistry based on perfluorinated chemicals has been replaced by safer alternatives Go to: G-Star RSL

G-STAR



15. March 2015

G-Star performed internal chemical management assessments at our most impactful suppliers Go to: G-Star MRSL

16. March 2015

G-Star published a substitution case study on Subsport; PFC-free alternatives for water repellent textile finish fabrics

Go to: PFC-free alternatives for water repellent textile finish fabrics

17. March 2015

G-Star partners with a denim mill to become a Bluesign® system partner Go to: Bluesign® website

18. August 2015

G-Star implements the Bluesign® Blueguide in its fabric development to enable sourcing of bluesign® approved fabrics Go to: Bluesign® website



3. Restricted Substance List / Manufacturing Restricted Substance List

3.1 G-Star 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 goes beyond 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.

The set-up of the product testing programme will be maintained in the upcoming years. On a seasonal basis and following our risk assessment, G-Star requests to receive two samples that are first out of production for chemical testing. Suppliers are requested to send the G-Star RSL team only bulk production samples and to strictly follow the procedures to avoid delay in shipments. Upon receipt the RSL team inspects the garments and sends the piece to an accredited laboratory in Europe for testing. All orders that are subject to testing can only be shipped after positive test results and approval of the RSL team. When new potential suppliers come in sight, the RSL team requests them to deliver fabrics for testing prior to starting production with the supplier. Testing fabric prior to production can diminish product testing failures significantly.

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.

The G-Star Restricted Substances List (RSL) version 1.3 is available online. As the European list of Substances of Very High Concern (SVHC) is updated twice a year, G-Star updates the G-Star RSL annually. When an update is done, our textile engineers and chemical specialists guide and train our suppliers to clarify the changes made in the updated RSL and the possible implications it has for production of garments. The next update of the G-Star RSL will take place in 2016.

3.2 Manufacturing Restricted Substance List (MRSL)

The G-Star RSL only focusses on product content. Use of restricted substances may also occur on the production floor in production processes even though the restricted substance is not added to the product. The MRSL addresses the input chemicals which are used during production. Hence, we also focus on the input chemistry and not only on end of pipe with the implementation of an MRSL.

The MRSL contains a list of chemical substances by CAS number 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 will assist our suppliers in phasing out the use of the 11 priority hazardous chemical groups and beyond those groups in the future. It establishes enforceable limits for hazardous substances in chemical formulations used to process materials. The list sets limits to eliminate the possibility of intentional use of listed substances and shall be used by our suppliers when purchasing materials and chemicals from their suppliers. The identification and use of safe substitutions will enable us to make further steps towards zero discharge of hazardous chemicals, such as the elimination of hazardous chemicals in effluent and reducing water usage in production due to new sustainable chemicals.

G-Star has made its MRSL publically available, including limits for leather processing.

In addition to the development of a MRSL within the ZDHC, G-Star has developed its own MRSL in 2014. The G-Star MRSL is aligned with the ZDHC MRSL and Bluesign. It has limits developed to ban the intentional use with a transparent process to add substances to the MRSL and Research List. It goes beyond the 11 determined classes, as it also includes limits for sensitizing disperse dyes, glycol ethers, PAHs, Arsenic and solvents. The implementation of the G-Star MRSL started in 2014 and is continued throughout 2015.

Progress

In 2014 G-Star finalized the draft of the G-Star MRSL. As an active ZDHC Member, G-Star's MRSL is overall aligned with the MRSL developed within the ZDHC and with Bluesign. Certain adaptions with regard to chemical substances (PFCs) have been made by G-Star in order to comply with our public Detox commitment.

In November 2014 we started implementation and training in our supply chain. We continued implementation and conducted a series of internal chemical management audits on hazardous materials, EH&S standards and waste water management. With this implementation G-Star moved a great step forward towards the ZDHC



goal, actively preventing hazardous chemicals to be used in manufacturing and moving towards a cleaner production. End of 2015 we started the process of adapting the MRSL based on experience and progress.

Using the precautionary principle, G-Star is actively engaged to add new chemicals to this list. The new version of the MRSL (2.0) will be made public in 2016 and includes testing methods for chemical testing of raw materials. The thorough implementation of the MRSL has taken considerable time which is followed in 2016 with environmental/chemical management audits. This will also including wastewater testing. The results will be used for an internal rating system on chemical management and in order to actively monitor the progress on our phase out commitment towards ZDHC by 2020. In 2016 we also aim to publish together with ZDHC documentation and guidelines on water discharge.

To support our MRSL and Environmental standards, we developed in 2015 the Environmental guideline for our suppliers. This document will be made public in 2016. The guideline will support the implementation of all our tools and train our suppliers on aspects as chemical safety, chemical management, waste water requirements.

3.3 Chemical Elimination

3.3.1 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 that highlights where there is a risk that APEOs may enter into the undocumented contamination of chemical supplier formulations.

<u>Status</u>

- G-Star has enforced a APEO ban in 2013.
- During 2013 we investigated the level of compliance with the APEO ban, reporting the findings to the public by publishing a report in August 2013 on <u>APEO Elimination Policy.</u>
- In 2014 we continued active monitoring and testing on the possible usage of APEO's. We found a 1,4% APEO failure rate over four seasons on all samples we tested within our testing policy.
- G-Star provided an online chemical training to its suppliers. APEO's were part of this online training in which all risks involved in using APEO's were explained. Due to the training, suppliers have refreshed their knowledge on sources and root causes of APEO contamination.
- We continue to request our suppliers and any new suppliers to use APEO/NPEO free chemicals and have enforced our system with checks and measurements to ensure our supply chain stays free of APEO/NPEO.

3.3.2 Phthalates elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all Phthalates, we acknowledge it is a priority to eliminate its 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.

<u>Status</u>

- G-Star has enforced a Phthalates ban in 2013.
- We are continuously monitoring on Phthalates and do not except any Phthalates in our garments and related plastic packaging material.
- We continue to urge our suppliers and any new suppliers to use Phthalates free chemicals and we implemented a system with checks and measurements to ensure our supply chain stays free of Phthalates.

3.3.3 Perfluorinated/Polyfluorinated Compounds (PFC's) elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all PFCs, we committed to eliminate PFCs in the products that 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 remaining PFC use by no later than 31 December 2014.

Progress

- As of January 2015 (for G-Star 15-1 pre collection) all G-Star garments are PFC free.
- We eliminated all long chain PFC's by December 2013.
- By the end of December 2013, we published a case study on Subsport, the substitution support portal, titled: <u>Root cause investigation of PFOS contaminations in leather garments</u> explaining possible use of PFOS in the leather industry.
- In March 2015 we published another case study on Subsport titled PFC free alternatives for water repellent textile finishes. This case describes the phase out of PFC chemistry for all products that require a water repellency function.
- In the process of elimination, all products possibly containing PFC have been mapped. On a one by
 one basis we have, in collaboration with our suppliers, looked for a PFC free solution that also meets
 our performance criteria. Next to that, we enlarged our RSL testing programme on this chemical
 group. This process will be continued in the coming year.

4. Transparency/Disclosure

4.1 Progress

In line with G-Star's commitment to the public's 'right to know' the chemical substances used within its global supply-chain and the products it sells, G-Star has taken the following actions in the past years:

- Published an updated 'Restricted Substances List' (including detection limits) and audit processes.
- Published an Manufacturing Restricted Substance List
- G-Star publically disclosed discharges of hazardous chemicals and detection limits in its supply chain (i.e. location and individual data of each facility) on an individual facility level, disclosing chemical-bychemical use and discharge data. We published data of around 80% of our Global South suppliers via the IPE and G-Star website.
- Published its suppliers in the supply chain via the online manufacturing and linked the information to product and projects undertaken in collaboration with the supplier.
- Working with ZDHC on a database to disclose supplier discharge/environmental data along with the other member brands as well as development of wastewater testing standards.

4.2 Manufacturing Map/supply chain disclosure

Suppliers that G-Star has worked with for over a decade make up half of the brand's production volume. Proud of these manufacturers, G-Star launched the Manufacturing Map in June 2014 so consumers can learn where their products are made. The map shows at which factories G-Star products are made, by describing the locations and production details including how long they have worked with G-Star, how many workers they have and in which sustainability programs they take part. The Manufacturing Map includes all direct suppliers with whom G-Star has a business relationship for over two years. In total, this covers 25 factories that together manufacture over 90% of G-Star's production volume. Through the Map, customers can also learn about the projects supported by the GSRD foundation across the various manufacturing countries.

Products in the G-Star online store are active on the map. This means that shoppers can discover the factory of origin of each product in the online store by clicking on the 'Where is it made?' button. With publishing the names and locations of our suppliers, G-Star takes a next step in transparency. This way we aim to highlight to our customers that all our products are manufactured in accordance with our social and environmental standards, and to promote a more transparent and ultimately more sustainable garment industry. We aim to continuously develop our manufacturing map with further supply chain information. A next update will be done in 2016.





5. Further Research

5.1 Polyvinyl chloride (PVC)

The use of polyvinyl chloride (PVC)was set to be phased out of G-Star garments by January 1, 2015.

Progress

- We keep on actively monitoring the usage of PVC.
- We expanded the scope of the PVC ban throughout the entire company and to all our products.
- We banned PVC since January 2012 in our RSL 1.0
- We reached our goal to eliminate PVC by the end of 2013 far ahead of our deadline in 2015.

5.2 Leather

G-Star continuously investigates the use of chemicals in its leather products and at the leather supplier.

Progress

- Leather is less than 5% of our collection.
- In 2013 we investigated alternative solutions for CrVI tanning and have developed further expertise on degreasing processes and the limitation of hazardous chemicals used in production of leather.
- In December 2013 we published a PFOS case study on PFOS in leather on Subsport, the substitution support portal.
- The traceability pilot study was postponed and will continue in 2016 to set up a tracing system for leather products back to its hide origin.

5.3 Denim finishing

Investigate methods to replace less sustainable processes in denim production with better alternatives.

Progress:

- In 2014 we mapped the techniques used at our denim suppliers to finish denim.
- In December 2014 a denim wet processing workshop took place in Dhaka for our local production team.
- In 2015, a denim wet processing and strategy setting took place at our Headquarters in Amsterdam for our Corporate Responsibility Department, technical engineers, and our sourcing, merchandise and design team. The gained knowledge is used to continue our work in 2015 to lower the footprint of denim finishing and improve our strategy

6. Partnerships

ZDHC

In 2012 we joined the ZDHC Group together with the brands adidas Group, Benetton, Burberry, COOP, C&A, Esprit, F&F, GAP, G-Star Raw, Gap, H&M, Inditex, Jack Wolfskin, Kering, Levi Strauss & Co., Limited Brands, L Brands, Li Ning, M&S, New Balance Athletic Shoe, Inc., NIKE, PUMA, Primark and PVH.

The joint mission of ZDHC is to advance towards zero discharge of hazardous chemicals in the textile and footwear supply chain and act to improve the environment and people's well being. The vision is widespread implementation of sustainable chemistry and best practices in the textile and footwear industries to protect consumers, workers and the environment.

ZDHC represents 22 leading brands committed to working together to drive industry-wide change.

For more information about the ZDHC Group and progress made in 2014, please visit the <u>ZDHC group</u> <u>website</u>.



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 eleven 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 (Young One and Saitex) are bluesign® system partner, as well as five trim suppliers G-Star works with. Until 2016 we visited several of our denim fabric suppliers together with bluesign technologies ag. In follow up to these visits in 2015 1 supplier have become a Bluesign partner.

Cleaner production at suppliers

Cleaner Production Programme

The programme with Solidaridad started in 2012 and has now transformed into Better mill initiative (BMI) China. Solidaridad is an international non-profit network organisation with more than 20 years of experience in creating fair and sustainable supply chains. The cleaner production program aimed to support factories with inhouse 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 started in 2012 at three of our key suppliers in China.
- In 2014 a follow up audit was performed at one of our key suppliers in China to monitor progress made in the following years and to analyse the impact of the program.
- One of our key denim fabric suppliers continues in the BMI throughout 2015.
- In 2015, based on the audit results, we further decided to fully focus on our Bluesign partnership for our key suppliers in China. We are supporting our suppliers to become Bluesign partner. The preparations for this partnership are continuing throughout 2015 and are positive we can announce key suppliers partnership of Bluesign in 2016.

TextilePaCT program

Please find more information on http://www.textilepact.net/

In 2013 G-Star joined the Bangladesh Partnership for Cleaner Textile (PaCT) with Solidaridad and the International Finance Corporation. The PaCT Programme is an extension of a Cleaner Production Pilot Programme in Bangladesh. The goal of PaCT 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 lead time of approximately 5 years and the majority of our G-Star suppliers in Bangladesh participate.

Progress:

- All suppliers that G-Star works with in Bangladesh are either a Bluesign member or participating in the PaCT programme.
- PaCT works with factories through the following approach:
 - Step 1 Awareness: The PaCT project is introduced to potential textile factories. Its goal, benefits, costs, investments and timelines are discussed.
 - Step 2 Basic CP: A basic Cleaner Production (CP) assessment is carried out by PaCT technical experts. They recommend ways to minimise use of resources like water, energy, chemicals, etc. and support factories to implement the measures.
 - Step 3 Deep Dive: The Deep Dive is an in-depth detailed assessment to identify capital intensive opportunities for large savings in water, energy and chemicals, within the wet processing unit, utilities and Effluent Treatment Plants (ETPs).

More detailed information can found here:

http://www.textilepact.net/pdf/publications/brochures/PaCT_Brochure.pdf

- In 2015 the G-Star suppliers have finished step 2 of the Cleaner Production Programme, the Basic CP assessment.
- One supplier, DBL Group is in a further stage of the project and has completed step 3 in 2015, the so-called Deep Dive.



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 The case studies from the PaCT programme can be found here: <u>http://www.textilepact.net/publications.html</u>

7. Other Sustainable Progress

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 yearly visits the Textile Exchange Sustainable Textile Conference and the Textile Exchange Organic Cotton Roundtable. In 2015 the conference was held in Mumbai, India . 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. 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 2015 is published by MADE-BY in the Product Cube of the G-Star MODE Tracker 2015.

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 MADE-BY. In 2015 MADE-BY launched the MODE Tracker, an updated version of MADE-BY's previous Scorecard system that gives a holistic overview of our sustainability achievements. The MODE Tracker assesses progress on eight sustainability areas: People, Product, Manufacturing, Packaging & Transport, Own Operations, Use & Durability, Product Waste and Transparency. The G-Star MODE Tracker can be found on the MADE-BY website.

RFTO

In February 2014 we launched our RAW for the Oceans collection that is made with Bionic yarn created out of plastic waste reclaimed from the sea. Making yarn out of ocean plastic that is suitable for RAW for the Oceans is done by Bionic. This company exclusively uses reclaimed bottles for its yarn. Plastic beverage bottles need to comply with high quality and safety standards and can therefore safely be converted into garments that meet G-Star's strict requirements on chemical use. The collected ocean plastic that cannot be used for RAW for the Oceans is included in the regular recycle process of the waste company and recycled for other purposes. After two years of experimenting with the RAW for the Oceans capsule collection we are now ready to make a bigger impact. We have started integrating recycled ocean plastic into our entire collection and plan to replace all conventional polyester (10%) with recycled polyester including Bionic Yarn by 2020.

CLOSING THE LOOP

1. Circle Economy

We became a member of Circle Economy's Circular Textiles Program with the ambition to close the textiles loop. We will join forces with other Circle Economy members, Wieland Textiles and Recover to create a business case for high value (textile-to-textile) recycling of our post- consumer garments.



2. Fashion Positive

G-Star is one of the launch partners of the Fashion Positive Initiative. together with other designers, fashion brands and suppliers that include our direct supplier Saitex and our RAW for the Oceans partner Bionic. The initiative gives designers, fashion brands and suppliers a platform to transcend industry challenges such as sourcing materials, modernizing manufacturing equipment, ensuring safe and healthy working conditions and leveraging collaboration to create desirable and sustainable apparel.

8. Next Steps 2016

Months	RSL UPDATE	MRSL	RSL TESTING	ENV. AUDIT (ZDHC) (<u>incl</u> Waste water testing)	BLUESIGN	Disclosure WW	ZDHC ACTIVITIES	WATERPACT - till 2018	ENVIR. Guideline training	CASE STUDIES	CHEMICAL MANAGEMENT /(M)RSL TRAINING SUPPLIERS
01											
02											
03											
04											
05		Relea sed 2.0									
06											
07											
08											
09											
10											
11											
12											
	(M)RSL			FOLLOW UP			TRAINING				

