

## WATEWATER RESULTS 2016 - EVALUATION SUPPLIER 5183

### BACKGROUND:

#### The way to cleaner production

We were the first company in the industry to have joined the [Zero Discharge of Hazardous Chemicals \(ZDHC\)](#) programme in 2012. The aim of this group of globally active clothing companies is to ban all dangerous chemicals from the entire production chain by 2020. This ambitious aim can only be achieved by working together with the industry, supervisory authorities and stakeholders. We're doing everything we can to achieve this aim.

Using regular water tests at our suppliers, we make spot checks to see whether systems already implemented (bluesign® system, ZDHC MRSL, etc.) have had the desired effect and no toxic chemicals are being emitted.

**The test results will be evaluated against the [ZDHC Wastewater Guideline 2016](#).  
All set limits are stated within the [ZDHC Wastewater Guideline](#). Please keep in mind, the tested water is wastewater!**

### TEST SCOPE & EVALUATION:

- **ZDHC Conventional parameters incl. metals:** The conventional parameters incl. metals includes all relevant tests to evaluate the quality of the treated wastewater (e.g. oxygen content, pH-value, temperature, purity).

The results can be categorized as Foundational, Progressive and Aspirational.

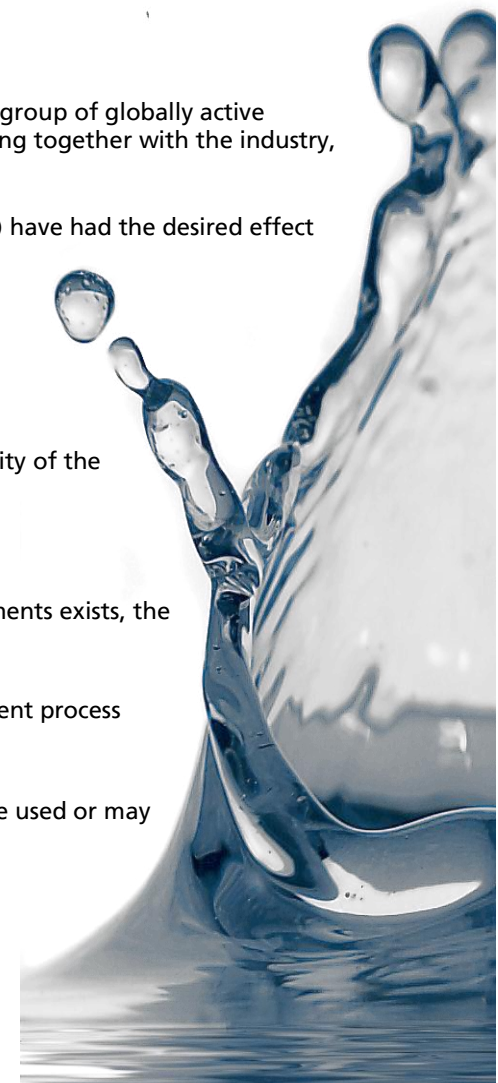
**Foundational:** In case any local legal requirements exists, these requirements are binding for any kind of evaluation. If no legal requirements exists, the ZDHC Foundational requirements shall be set as minimum requirements.

**Progressive:** Demonstrates increasing knowledge of chemical management and applies advanced wastewater treatment processes.

**Aspirational:** Demonstrates best-in-class performance and strives for continuous improvement in both chemicals and wastewater treatment process knowledge; creates industry best practices.

- **ZDHC MRSL Substances:** [MRSL](#) stands for Manufacturing Restricted Substances List and refers to a list of chemicals, which should not be used or may only be used in limited quantities, as they can be harmful to humans or the environment above a certain concentration.

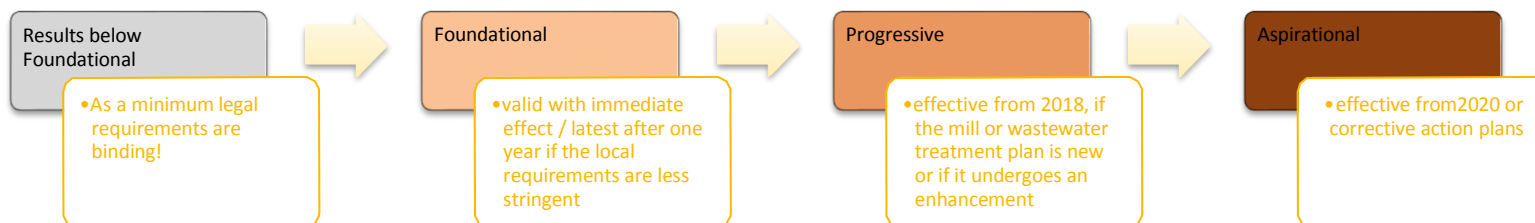
The results can be categorized as pass and fail.



## STEPS:

### ZDHC Conventional parameters incl. metals:

- In case the test results are below the **Foundational Level**, the local legal requirements are binding.
- The suppliers are encouraged to achieve the **Foundational Level** as soon as possible but latest one year after publishing the guidance.
- If a factory starts production after January 2018 or the wastewater treatment plant undergoes an enhancement or is completely new, the **Progressive Level** is binding.
- Until 2020 it is expected that all suppliers either fulfil the requirements of the **Aspirational Level** or share plans how to achieve it.



### ZDHC MRSL Substances:

- In case of any fails the suppliers are requested to share its corrective action plans, how to improve the processes to achieve the set limits.

### Note:

All suppliers can be categorized in direct discharge and indirect discharge. Direct discharge means, the supplier has its own wastewater treatment plant. After the wastewater treatment, the water can be directly discharged to any surface water bodies like rivers. If the mill cooperates with a centralized or common wastewater treatment plant, it is a so-called indirect discharge. In case of an indirect discharge the supplier discharges the wastewater to an external treatment plant – in some cases the supplier already purifies the used water as a first step. The water will be discharged to any surface water body by the centralized or common wastewater treatment plant.

The requirements of conventional parameters incl. metals are not valid if a supplier has an indirect discharge – the agreed requirements from the supplier and the common wastewater treatment plant are valid.



### TEST RESULTS - ZDHC Conventional parameters incl. metals:

The supplier **5183** indirectly discharges the wastewater to an external treatment plant – the requirements for „**indirect discharge**“ are valid. For any detailed results, please study the report VN5L1611017245TX.

The dots from below chart represents the achieved results.

		Results below Foundational	Foundational	Progressive	Aspirational
Conventional parameters	Temperature [°C]	-	-	-	-
	TSS	-	-	-	-
	COD	-	-	-	-
	Total-N	-	-	-	-
	pH	-	-	-	-
	Colour	-	-	-	-
	BOD5	-	-	-	-
	Ammonium-N	-	-	-	-
	Total-P	-	-	-	-
	AOX	-	-	-	-
	Oil and Grease	-	-	-	-
	Phenol	-	-	-	-
	Coliform	-	-	-	-
	Persistent Foam	-	-	-	-
	Sulfide	-	-	-	-
	Sulfite	-	-	-	-
Metals	Antimony	○			
	Chromium, total	○			
	Cobalt		○		
	Copper		○		
	Nickel	○			
	Silver		○		
	Zinc		○		
	Arsenic		○		
	Cadmium		○		
	Chromium (VI)		○		
	Lead		○		
	Mercury		○		

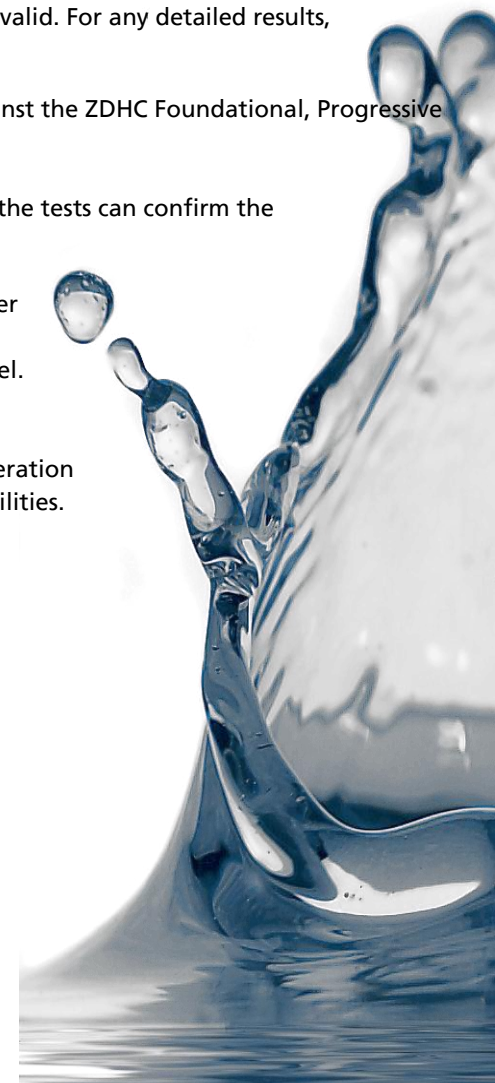
\* we acknowledge that for polyester production it will take time to reach the limit.

The supplier cannot be evaluated against the ZDHC Foundational, Progressive and Aspirational Levels.

Due to limited laboratory capabilities the tests can confirm the Foundational level only (Metals).

In most cases the untreated wastewater nevertheless can fulfill the requirements of the Foundational Level.

Jack Wolfskin, the laboratory and the supplier are discussing in a close cooperation possible improvements and test capabilities.



**TEST RESULTS - ZDHC MRSL Substances:**

The dots from below chart represents the achieved results.

		PASS	FAIL
MRSL Substances	Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs): Including All Isomers	●	
	Chlorobenzenes and Chlorotoluenes	●	
	Chlorophenols	●	
	Dyes – Azo (Forming Restricted Amines)	●	
	Dyes – Carcinogenic or Equivalent Concern	●	
	Dyes – Disperse (Sensitizing)	●	
	Flame Retardants	●	
	Glycols	●	
	Halogenated Solvents	●	
	Organotin Compounds	●	
	Perfluorinated and Polyfluorinated Chemicals (PFCs)	●	
	Otho-Phthalates – Including all ortho esters of phthalic acid of phthalic acid	●	
	Polycyclic Aromatic Hydrocarbons (PAHs)	●	
	Volatile Organic Compounds (VOC)	●	

All tests have passed – the set requirements already are achieved.

