TÜVRheinland®
Precisely Right.

TÜV Rheinland Group Chemical Management for Apparel & Footwear Industry

Zero Discharge of Hazardous Chemicals to Achieve Sustainable Development

Almost, every person on the planet is in contact with some sort of textile, fabric, or footwear. Each of these products uses chemicals during the manufacturing process – either to achieve a function like water-repellence, for adding texture, or more commonly for color. The wide use of chemicals, the large quantity of water, and the presence of hazardous chemicals in the waste water are some of reasons for the apparel and footwear sector to be regarded as one of the most environmentally polluting industries in the world; along with safety risks for workers and consumers.

This growing awareness and concern of health, safety, and environmental issues related to chemicals in textiles have been driven by numerous factors:

- An increased knowledge of the hazards associated with chemicals used
- Legislations (such as REACH in the European Union or California Proposition 65 in the USA)
- Campaigns by NGOs like Greenpeace's Detox campaign
- The desire of modern consumers for products that are safer for human health and environment

While efforts by the industry to address the challenges were already underway via OIA's (Outdoor Industry Association) Chemical Management and Sustainability workgroup; and via SAC's (Sustainable Apparel Council) Higg Index; this was further enhanced via ZDHC's (Roadmap towards Zero Discharge of Hazardous Chemicals) efforts.

ZDHC's mission 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. This is to be achieved by widespread implementation of sustainable chemistry and best practices in the textile and footwear industries to protect consumers, workers, and the environment.

The ZDHC Programme has identified four key areas and two cross-cutting areas which are critical towards eliminating hazardous chemicals from the global textile and footwear industries.

The key areas are

- Manufacturing Restricted Substances List (MRSL)
- WasteWater Quality
- Audit Protocol
- Sound Management of Chemicals (SMC) Training Services

Manufacturing Restricted Substances List (MRSL)

Chemicals in MRSL

1 Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs)
2 Chlorobenzenes & Chlorotoluenes
3 Chlorophenols
4 Azo Dyes
5 Navy Blue (Dye)
6 Carcinogenic Dyes
7 Sensitizing Disperse Dyes
8 Flame Retardants including Short Chained Chlorinated Paraffins (SCCP)
9 Glycols
10 Halogenated Solvents
11 Organotin Compounds
12 Polycyclic Aromatic Hydrocarbons (PAHs)
13 Per- and Polyfluorinated chemicals (PFCs)
14 Phthalates (Ortho-phthalates)
15 Total Heavy Metals
16 Volatile Organic Compounds (VOC)

WasteWater Quality

Service Workflow for WasteWater and Sludge Testing

Audit Protocol

Customized Chemical Management Audit

Suppliers should

- Establish their own chemical management system
- Control the hazardous substance from source
- Strengthen processing control, testing and waste disposal
- Reduce the negative environmental impacts of hazardous chemicals
- Provide certificate to proof their own chemical management system are well-established and operated

TÜV Rheinland can design an audit tool based on requirement of supplier's chemical management which required by buyers:

- Procurement management of raw material and chemical
- Storage management of raw material and chemical
- Usage of chemical and production processing management
- Quality management of semi-finished product and final product
- Pollutant disposal and control

Based on the supplier's performance, TÜV Rheinland will grade each module and conclude the final result. So supplier can show the chemical management performance to buyers and then track, compare and improve their own performance with the result.

SAC/Higg Index Verification

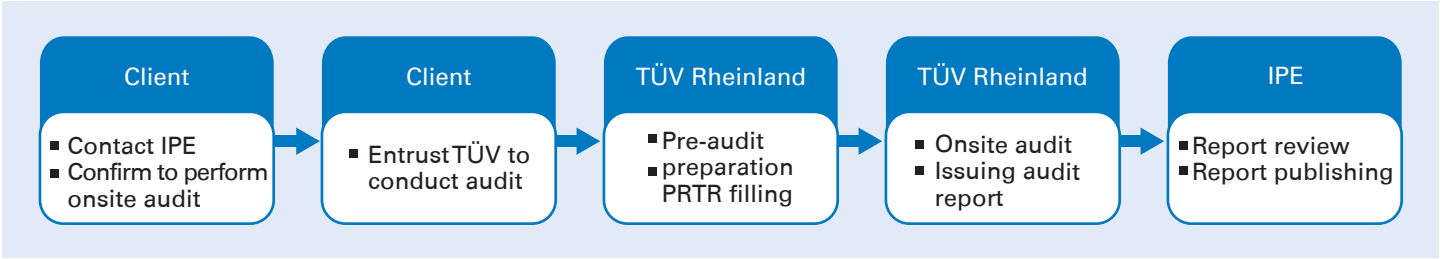
The Sustainable Apparel Coalition (SAC) is to collect peers and competitors from across the apparel, footwear and textile sector and together, develop a universal approach to measuring sustainability performance.
Higg Index, a standardized supply chain measurement tool for all industry participants, is developed and maintained by SAC. It contains a set of self-assessment tools which can be used by buyers or factories of apparel, footwear and textile sector to comprehensively understand their sustainability performance.
The Environment Module contains seven sections:

- Environmental management systems
- Energy use and greenhouse gas emissions
- Water use
- Wastewater/effluent
- Emission to air (if applicable)
- Waste management
- Chemical use and management

Prepare document list & Preview the documents → Onsite observation/ verification & Compare with the provided document → Calculate Higg score; Report verfication result & Send to SAC → SAC upload verification report

IPE Audit

The Institute of Public and Environmental Affairs (IPE) is a registered nonprofit organization based in Beijing. The IPE has developed and operated two national pollution database to monitor corporate's environmental performance, and to promote public participation in environmental governance. More and more national and international brands adopt the IPE pollution map database to investigate their suppliers' environmental performance, as one common means for screening suppliers. TÜV Rheinland is an IPE accredited third party audit body to perform IPE audit. Through onsite audit, TÜV Rheinland can assist the facilities which have completed corrective actions to remove the environmental supervision record. During the audit, TÜV Rheinland will assess the pollution management system and environmental compliance of the facility. IPE and other NGO will be present in the onsite audit all the time, to ensure the integrity and transparency. The audit result will be published on IPE website as per requirement.



Sound Management of Chemicals (SMC) Training Services

- Chemical Management Training for Textile industry (based on ZDHC curriculum, GIZ Chemical Management Toolkit)
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), and Safety Data Sheets (SDS)
- Chemical Inventory Management with our proprietary TOGS database
- Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation
- SAC Higg Index
- Occupational Health and Safety management
- Environmental Management

Capacity Development Programs for Supply Chain

FIT5 (Factory Improvement Training) based on WE program and ILO SCORE program

About TÜV Rheinland Group

TÜV Rheinland Group has more than 140 years of experience and is headquartered in Cologne. TÜV Rheinland Group is a leading group for provision of technical services worldwide. It has more than 500 locations in over 60 countries with a work force of over 19,000. The business scope covers Industrial Services, Mobility, Products, Academy and Life Care, ICT & Business Solutions, Systems.

Now TÜV Rheinland is giving manufacturers, retailers and consumers a clear advantage.

New: Certipedia in optimized form
It offers consumers a better understanding of test content and test summaries. The display of all content can be customized, e.g. with your company logo, photos and information that is relevant to the consumer.

New: Individual ID numbers
They lead consumers directly to your Certipedia ID entry, with clear statements about the testing in terms that are easy to understand.

A good sign gets even better

The TÜV Rheinland test mark stands for safety and quality, is promotionally effective, and serves as a valuable guide – and it has been doing so for a long time. But consumers and statutory regulations demand more. That's why the updated system using the successful test marks and certificate database now offers everyone more advantages than ever.

Safety and responsibility

Growing consumer demands and the evolution of consu-mer protection come as no surprise to long-time observers. TÜV Rheinland, earlier than other testing services providers, created the necessary environment for a reliable, resolutely consumer-oriented presentation of test results.

Your competitive edge through greater transparency

We not only developed an innovative test mark, but we also have been providing a consumer-friendly reference source for the publication of test content for many years now – our certificate database Certipedia, which can be accessed at any time, anywhere in the world – combined with an indi-vidual ID number on your test mark.

That pays dividends for you. Because with us you're in a good position when it comes to transparency. Through individual test mark IDs, you make the assessment of test results clearer for consumers.

Moreover, our optimally organized system for issuing test marks gives you full access to your own test mark through online download, including a quick overview of all color variants and functions.

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