



MRSL Conformance for Chemical Manufacturers

There is more to chemical supply industry success than meeting delivery deadlines. Strict regulations, health concerns and environmentally conscious customers mean that chemical manufacturers are increasingly expected to meet Manufacturing Restricted Substance List (MRSL) conformance criteria. And so are wet-processing facilities, brands and retailers interested in satisfying authorities, winning more business and reassuring end-user consumers.

ABOVE AND BEYOND RSL

Textile companies use Restricted Substances Lists (RSLs) to manage the amount of hazardous chemicals in finished products. The use of hazardous chemicals in the production process can also have an adverse impact to the health of factory workers and the environment in countries where the items are made.

The first step to address this challenge is the Manufacturing Restricted Substances List (MRSL) developed by the Zero Discharge of Hazardous Chemicals ZDHC Group (ZDHC). It covers majority of the hazardous substances intentionally used – and therefore discharged into the environment – during manufacturing.

MRSL IN ACTION

The ZDHC MRSL sets restrictions on trace concentrations for banned chemical substances that are not intentionally used, but may be found as unintended contaminants within a commercial chemical formulation, enabling chemical producers and product manufacturers to manage inputs and remove hazardous substances from the manufacturing process.

Implementing MRSL requirements may change the way facilities that process textile and leather look at the chemicals management. It starts with procurement, where preventing chemicals from entering the facility can reduce the need to treat and clean-up effluent water and solid waste. Ultimately,



it covers any chemical used within the walls of a manufacturing facility – including those used to clean the premises and production equipment.

ZDHC MRSL LEVEL 1 CONFORMANCE

Merely ensuring that MRSL-compliant chemicals conform to standards at input doesn't necessarily lead to clean outputs. Factors such as the production process, reactions and contamination can all create problems.

E. Annex A – Quality Control Guidance for Analytical Test Data Supporting ZDHC MRSL Conformance

Table 1. Recommended Tests Per Formulation Type ("smart testing")

CHEMICAL FORMULATION TYPE	SUBSTANCE GROUPS AND SUBSTANCES MENTIONED IN MRSL													
	Use Code	AP & APEO	Chlorobenzenes + Solvents	Chlorophenols	Cres. Aromatic Amines	Heavy Metals	Dye-Cat. Dye	Dye-Digester	Fluoro. Retardants	Glycols	Solvents, Hubs	Organics	PHI	
1.1 Auxiliaries and finishing agents for fibres and yarns														
1.1.1 Spinning solution additives	X								00					
1.1.2 Spinning additives	X								00			X	X	
1.1.3 Spinning bath additives	X								00					
1.1.4 Preparation agents	X								00					
1.1.5 Lubricants	X								X					
1.1.6 Coating oils, weaving and twisting oils	X											X	X	
1.1.7 Conditioning and stabilizing agents	X													

The ZDHC Programme relies on expert third-party certification bodies, such as TÜV Rheinland, to gauge conformance. We have created sophisticated certification systems, based on assessments during production and evaluations of finished products, to help suppliers demonstrate conformance with ZDHC MRSL Level 1 criteria. Once certified by TÜV Rheinland, they can register their company and product safety data sheets (SDS) on the ZDHC Gateway Module.

GLOBAL COMPETENCIES

	CN	BD	IN	TK	VN	ID	DE	TH
	✓	✓	✓	✓	✓	via VN	✓	✓
	✓	✓	✓	✓	✓	via VN	via TK	via VN
	✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	NA	✓
	✓	✓	✓	✓	✓	✓	✓	✓

Legend: CN - China, BD - Bangladesh, IN - India, TK - Turkey, VN - Vietnam, ID - Indonesia, DE - Germany, TH - Thailand

 **Chemical formulation / MRSL conformance**

 Sound management of chemicals (SMC) training

 Wastewater testing

 Chemical management verification/assessment/audit: amfori BEPI/SAC Higg FEM

 Product testing

ZDHC MRSL CONFORMANCE LEVEL [1] ASSESSMENT IN CONNECTION TO ZDHC GATEWAY™: CHEMICAL MODULE

The ZDHC Programme's detailed Manufacturing Restricted Substances List (MRSL) is designed to enable the apparel and footwear industry to manage the input of chemicals to the suppliers and remove those hazardous substances from the manufacturing process. TÜV Rheinland's DETOX specialists take the guess-work out of that process. Our experts help companies avoid expensive mistakes by meeting the acceptable limits for these substances and chemical formulations used within manufacturing facilities.



ZDHC WASTE WATER AND SLUDGE TESTING

Testing is the key to ensuring progress towards a greener and more sustainable supply chain, regardless of economic conditions or business challenges.



TÜV Rheinland's hazardous substances testing services can help organisations to ensure that their production process – including waste-water and sludge – remains free of such substances, in line with ZDHC wastewater guidelines. These testing results can also be used for targeted follow-up audits and training.

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ZDHC TRAINING

TÜV Rheinland has been actively promoting sound chemical management for nearly a decade. Today, we are an accredited ZDHC Foundation global training provider, helping brands and manufacturers to improve their knowledge and open the door to conscious buyers and consumers globally.



IMP-ACT PROGRAM

With our IMP (Improvement) ACT (Actions) program, experts at TÜV Rheinland conduct root cause analysis when failure and/or non-conformance is encountered either during an audit or waste water analysis. The results are combined with recommendations to align with DETOXing goals.

BEPI AND SAC AUDITS / VERIFICATION

The Business Environmental Performance Initiative (BEPI) is designed to improve global supply chains. TÜV Rheinland's experts can help make the most out of such an enhanced approach environmental risk management. Auditors with extensive chemical expertise also review chemical management processes and tools. And unlock attractive benefits, including cost reduction, increased productivity and competitiveness.



In addition, TÜV Rheinland is a contributing member of the Sustainable Apparel Coalition (SAC). We are heavily involved with Training and Assessment activities related to the Coalition's flagship Higg Index, which empowers businesses to make meaningful improvements that protect the well-being of factory workers, local communities and the environment.



CAPTURE A SHARE OF CLEANER MARKETS

It is easy for manufacturers to produce 'clean' finished products by washing and flushing undesired chemicals into the local sewerage system before delivery. But it is extremely short-sighted and a deterrent, rather than an attraction, for big buyers and regulators.

Contact TÜV Rheinland today to find out how you can capture your fair share of the growing market for textiles, clothing and footwear that are free of harmful chemicals. Because sustainability never goes out of fashion.

