ZDHC

ZDHC Responsible Solvents Approach Quick Reference Guide

NOTES

This ZDHC Responsible Solvents Approach Quick Reference Guide is designed to help readers gain a quick understanding of the comprehensive ZDHC Responsible Solvents Approach Guide V1.0. It provides a high-level overview and concise information, while the full document offers detailed information and thorough clarification on all aspects of responsible solvent management as part of the implementation of ZDHC Roadmap to Zero Programme. For a comprehensive understanding and to delve deeper into the subject matter, we highly recommend reviewing the full document.

This document should be read in conjunction with:

- ZDHC MRSL V3.1
- ZDHC MRSL Conformance Guidance V2.0
- ZDHC CMS Framework V1.0
- ZDHC CMS Technical Industry Guide V1.0

For commonly used term definitions please refer to our glossary.

DISCLAIMERS

The ZDHC Responsible Solvents Approach Guide V1.0 does not replace legal or brand-specific chemical management requirements. For the full ZDHC Responsible Solvents Approach Guide V1.0 disclaimer please see ZDHC Responsible Solvents Approach Guide V1.0

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Introduction

Background

Organic solvents are used in various processes in the apparel and footwear industries (refer to **full RSAG document**, Chapter 2). The **ZDHC MRSL V3.1** includes a ban on the intentional use of specific organic and halogenated solvents in textile, leather and footwear production and is therefore a signal to the industry to take appropriate action to shift to safer alternatives.

Whilst these solvents listed within the ZDHC MRSL V3.1 are considered non-conformant, there are some textile and footwear facilities which still use these and which will take time to phase-out. Where these solvents are still currently used and a safer alternative has yet to be sourced, proper emissions and exposure controls must be in place at the facility to ensure worker safety and reduce the environmental impact.

What is the objective?

This guide provides information on safer solvents that can be used in apparel and footwear processes and best practices for emission and exposure control for worker safety through engineering controls and use of appropriate PPE. The objective of this document is to:

- Guide facilities on a responsible approach in the use of solvents and solvent-based formulations to ensure proper emission and exposure controls.
- Advise on actions that can be taken by suppliers to shift to safer alternatives and processes in the apparel, textile, leather and footwear industries for the ZDHC MRSL-listed solvents.

The intention of this document is to drive positive transformation to a sustainable supply chain and minimise emissions and exposure to workers and the environment through the implementation of best practices.

What is in scope?

The ZDHC MRSL V3.1 lists halogenated and organic solvents which are restricted from intentional use in the production of apparel, textile, leather and footwear

The transition to safer alternatives requires a time-bound phase-out strategy at facilities, during which time suppliers must ensure proper emission and exposure controls at the facility level to ensure worker health and safety and reduce their environmental impact. Within the ZDHC MRSL certain solvents are marked with 'EC'. This means that adequate emission and exposure controls should be implemented by a facility in case these solvents are used and in the phase-out stage.

To see the full list of solvents refer to the **ZDHC Responsible Solvents Approach Guide V1.0**

Chemical formulations containing any of these solvents listed, above the published formulation limits are non-conformant with the ZDHC MRSL.

Document summary

The document has content under the following chapters:

	Chapter	Description
	**1)** Safety and hazard identification of solvents in the ZDHC MRSL V3.1	Details on hazard profiling of the ZDHC-MRSL solvents and advises on important sections in a Safety Data Sheet (SDS) to gather information on hazard data sets.
	**2)** Use patterns in different applications and formulations for apparel, textile, leather and footwear.	Details the different applications and formulations explaining, the different uses of these solvents in production.
	**3)** Safer alternatives	How to substitute the ZDHC MRSL-listed solvents and available safer alternatives. Plus different approaches to finding the safer alternatives.
	**4)** Chemical management best practices	Details chemical management practices that should be implemented by suppliers at their facility to properly manage the ZDHC MRSL non-conformant solvents, in case these have to be used.
	**5)** Training and education	Training and education of staff, workers and management is important for managing solvents in a responsible manner.
	**6)** Industry examples of solvent management - Supplier “To Do” Checklist	A supplier can implement actions from this document as described in the TO DO Checklist with cross-references to the chapters for a more detailed understanding on the actions required.

Impact

How it impacts brands

The aim of the ZDHC Responsible Solvents Approach Guide V1.0 is to initiate action to phase-out restricted solvents from the production process. Large scale shifts in industry behaviour require a drive from the top-down, and cannot be achieved alone. ZDHC has delivered an industry guide that brands can use across their supply chain, ensuring a consistent message is shared from multiple brands.

Brands not only need to share the guide with suppliers to ensure proper emission and exposure controls are in place within their facilities, but also actively request safer alternatives e.g. DMFa-free PU in their footwear products. This will require brands to assess their supply chain and work with their supply chain partners to achieve this goal, whilst still maintaining quality and performance characteristics.

How it impacts suppliers (manufacturing facilities)

Upgrading facilities and training workers may incur costs, but they’re crucial for safe and responsible solvent management, safeguarding both employees and the environment.

As brands request safer alternatives to these ZDHC MRSL-restricted solvents the competition between suppliers will be who can provide products with the same quality and price (or better) than before to brands.

Implementation

Brand actions

Brands have a responsibility to drive better chemical management practices within the industry. They should work with their supply chains to phase-out the use of restricted solvents in production processes.

In order to do this brands should:

- Raise awareness of the ZDHC Responsible Solvents Approach Guide V1.0 with their supply chain partners, through email, webinars, training etc.
- The chemical management teams within the brand should work closely with the buying, sourcing and merchandising departments to build a phase-out timeline and business case into their sourcing strategy. Ensuring that better chemical management practices are taken into consideration when selecting suppliers, not only price.
- Monitor their supplier's chemical inventory through InCheck Reports to ensure the phase-out of the ZDHC MRSL listed solvents

Supplier actions

Suppliers using ZDHC MRSL-restricted solvents marked with 'EC' are expected to make all necessary changes to their facility and action required training for workers/ management. These changes should be made immediately to ensure worker safety and reduced environmental impact.

The ZDHC Responsible Solvents Approach Guide V1.0 provides suppliers with TO DO checklists to support them to ensure they carry out the required actions for responsible emissions and exposure controls for the restricted ZDHC MRSL solvents.

At the same time, suppliers should be seeking safer alternatives to the restricted solvents and substituting these with safer alternatives by working closely with chemical formulators. As well as developing a timeline for phase-out with brands that is workable for both sides.

Chemical formulators actions

Chemical formulators should work towards developing and providing safer alternatives for ZDHC MRSL-restricted solvents. Ensuring the output quality remains the same as the solvent they are substituting. These should be scalable and globally available. The RSAG chapter on Safer Alternatives can be used by formulators to evaluate the different approaches.

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