Manufacturing Restricted Substances List

Zero Discharge of Hazardous Chemicals Programme

Q1: What is the Zero Discharge of Hazardous Chemicals (ZDHC) Manufacturers Restricted Substances List (MRSL)?

A1: The ZDHC MRSL is a list of chemical substances banned from intentional use in facilities that process textile materials and trim parts in apparel and footwear. The MRSL establishes acceptable concentration limits for substances in chemical formulations used within manufacturing facilities. The MRSL limits are designed to eliminate the possibility of intentional use of listed substances.

Q2: How does the MRSL differ from a Restricted Substances List (RSL)?

A2: A typical brand RSL sets concentration limits for substances in materials or finished products to comply with product regulation and safety standards. The MRSL establishes concentration limits for substances in chemical formulations used within manufacturing facilities.

Q3: What is the purpose of the ZDHC MRSL?

A3: Existing RSL limits for materials and finished products ensure that products are safe for consumer use, legally compliant and safe for the environment upon disposal at end of life. The ZDHC MRSL is intended to assist the apparel and footwear supply chain in phasing out the use of restricted substances by establishing enforceable limits for hazardous substances in chemical formulations used to process materials. The MRSL addresses process chemicals used to produce materials but that may not end up in the finished product.

Q4: To what does the ZDHC MRSL apply?

A4: MRSL limits apply to commercially available chemicals, chemical mixtures or chemical formulations. A commercial chemical formulation is usually a proprietary blend of several chemical substances that is available for purchase from chemical suppliers under their own trade name.

Q5: How was the ZDHC MRSL developed?

A5: The ZDHC MRSL includes relevant substances from the original 11 priority chemical groups in the Joint Roadmap along with additional substances identified by qualified experts from the ZDHC Technical Advisory Committee (TAC) and member brands. Industry experts, including leading experts in material processing, were consulted to determine concentration limits necessary to ban intentional use. These limits allow for reasonable expected manufacturing impurities and contaminants often resulting from manufacturing processes.

Q6: Why aren't all the limits at zero or at current detection limits?

A6: Chemical control legislation allows for trace impurities because impurities may exist in chemical starting materials (fossil fuels) or as byproducts of chemical reactions. The MRSL takes into consideration the technical limitations of chemical manufacturing by establishing strict limits on unintentional substances.

Q7: Why do ZDHC MRSL limits in some cases appear to be much less restrictive than material or finished product RSL limits?

A7: Chemical formulations are highly concentrated before being diluted during their use in wet processing. As such, intended and unintended substances in finished products will almost always be found in smaller concentrations than in the chemical formulations used throughout wet processing to produce them. MRSL formulation limits account for this dilution effect and are more restrictive since they are designed to meet and exceed the strictest finished product RSL limits.

Q8: Is the ZDHC MRSL a replacement for brand product RSL restrictions?

A8: No. While there is significant overlap between the ZDHC MRSL and brand RSLs, not all RSL substances are covered in this list. The MRSL is focused on eliminating intentional use of certain substances during manufacturing processes. Many substances listed on brand RSLs are not banned from intentional use, but to meet safety and regulatory requirements they must not be found above designated limits in materials or finished products. For those RSL substances that are included on the MRSL, strict adherence to MRSL limits in chemical formulations should enable compliance with brand RSL limits in materials and finished products.

Q9: How can individual brands implement or make use of the ZDHC MRSL?

A9: ZDHC member brands will support distribution of the MRSL and implementation of the standard at their discretion. We hope that other brands will consider adopting this list as a common standard in the supply chain. Examples of use or implementation include:

- Sharing the MRSL with product suppliers, raw material vendors and chemical suppliers to provide clear direction on the new standard.
- Developing a documentation/verification program to ensure that purchased chemical formulations meet established limits.
- Implementing training programs or workshops to educate suppliers on the goals and requirements of the MRSL so they are prepared to discuss MRSL requirements with their chemical suppliers.

Q10: How will the ZDHC MRSL be adopted?

A10: Adoption of the ZDHC MRSL is the responsibility of each individual brand. The ZDHC Group will provide information, tools and trainings to assist brands and their suppliers in implementation of the MRSL.

Q11: Is there a date by which chemical suppliers are expected to comply with the ZDHC MRSL?

A11: Implementation timelines for the ZDHC MRSL are part of the communication between individual member brands and their suppliers.

Q12: How can processors of textile and trim part materials ensure that the chemical formulations they purchase comply with the ZDHC MRSL?

A12: Some suppliers producing products for ZDHC brands already have experience phasing out restricted substances from materials and finished products. The MRSL will assist these efforts by providing an industrywide standard by which to hold chemical suppliers. The ZDHC Group will publish and distribute chemical information sheets to support material suppliers in their communications with chemical suppliers to ensure that purchased chemical formulations meet MRSL limits.

Q13: What test methods should be used to test for restricted substances in chemical formulations?

A13: ZDHC has included test methods for MRSL substances in chemical formulations, if they exist. Other MRSL substances will require the development of new test methods through ZDHC partnership with commercial testing laboratories and other organizations.

Q14: How will the ZDHC Group assist the global supply chain in implementing the MRSL?

A14: The ZDHC Group will provide information, tools and trainings to assist brands and their supply chains in meeting MRSL requirements. The group is exploring solutions that provide certifications whereby chemical manufacturers can declare that their chemical formulations are compliant with the MRSL. Details of this initiative and how the ZDHC Group intends to verify compliance are forthcoming.

Q15: When will the ZDHC Group publish MRSL limits applicable to chemical formulations used in leather processing?

A15: The ZDHC Group expects to update the MRSL to include limits for leather processing in the near future. Special considerations of the chemistry involved made it necessary for ZDHC to separately address leather processing at a later date.

Q16: Why are metal trims parts exempt from MRSL requirements?

A16: Metal component manufacturing involves unique production processes and chemistry entirely unrelated to textile processing. Hazardous metals potentially used in metal trim parts are more effectively controlled by material or finished product RSL limits.

Q17: How often will the ZDHC Group update the MRSL?

A17: Exact timing of ZDHC MRSL updates has not been established yet. The ZDHC Group will improve the list and limits as additional information becomes available.

Q18: What is the ZDHC Research List and how is it related to the ZDHC MRSL?

A18: Using the ZDHC prioritisation framework, the ZDHC Group identified a number of additional priority substances potentially used within the apparel and footwear supply chain that were not included in the original 11 priority classes identified in the Joint Roadmap. Those newly identified priority substances for which there are existing safer alternatives were added to the MRSL for action. Those substances identified as priority chemicals without immediate safer alternatives were placed on the Research List for additional research.