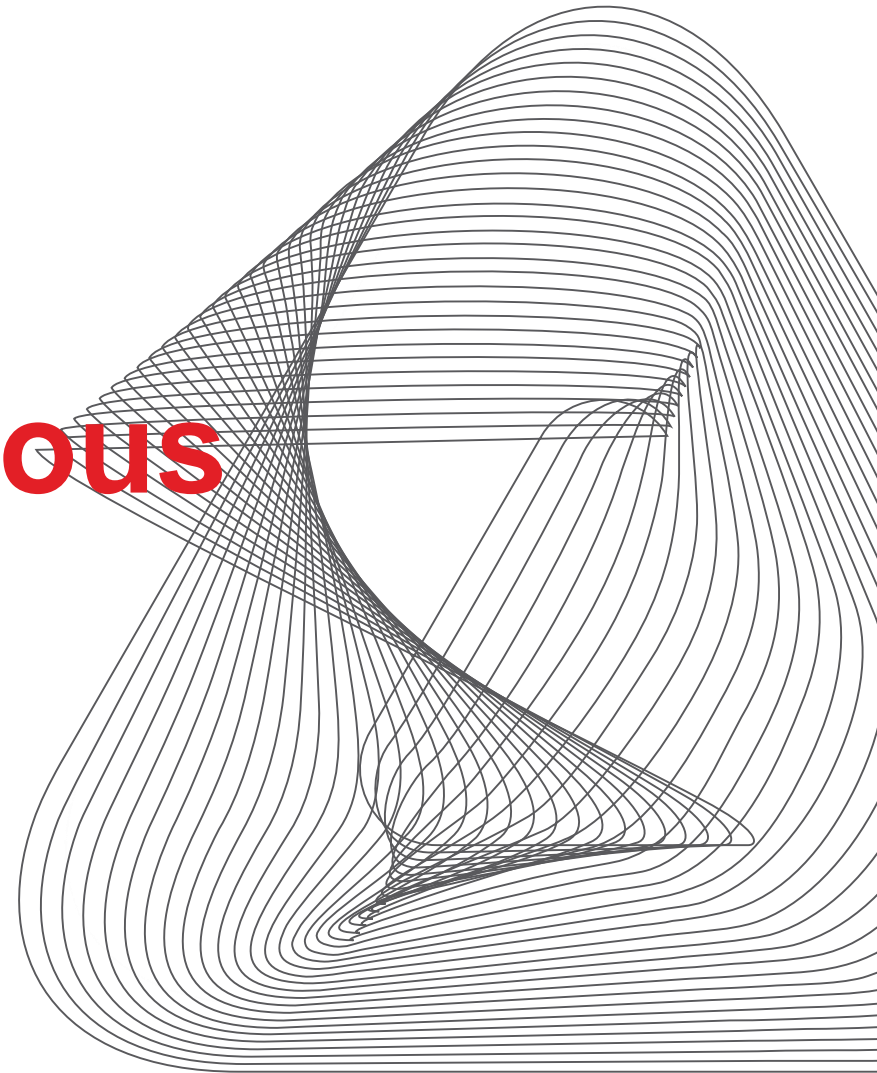


Avery Dennison RBIS - Zero Discharge of Hazardous Chemicals (ZDHC)

September 2022



Introduction

- Avery Dennison continuously strives to adopt industry best practices to manage chemicals, substitute hazardous chemicals with safer alternatives, and better environmental profiles wherever possible.
- We are committed to using ZDHC MRSL conformance chemicals and eliminating hazardous substances as listed in the ZDHC MRSL from use and discharge from our facilities.
- It is Avery Dennison RBIS's ambition to have all chemicals used in our facilities be ZDHC level 1 or above registered by the year 2023, and progress to level 2 and 3 conformance by 2025.

Supplier Actions

- Attend a ZDHC information session
- Register your company on ZDHC Gateway
- Complete supplier survey

Questions?

Avery Dennison RBIS Product compliance team email:
rbis.ww.productcompliance@averydennison.com

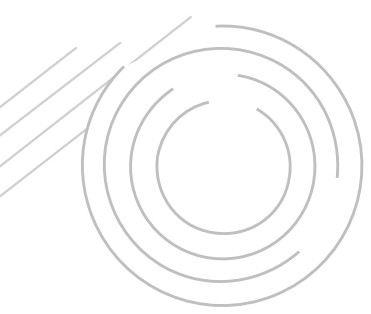


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CHEMICAL MANAGEMENT WEBINAR SERIES –

ZDHC MRSL CONFORMANCE

2022



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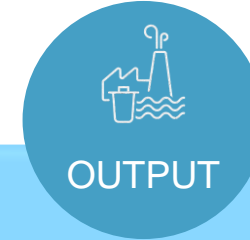
Chemical Management



- ❖ **Chemical Conformance Testing**
- ❖ **Chemical Inventory List Management through BVE3**



- ❖ **Chemical Management Audit**
- ❖ **Process Assessment & Management**
- ❖ **Knowledge Management**
- ❖ **Corrective Action Plan**



- ❖ **Emission Monitoring**
Water Testing
Air Emission Measurement



- ZDHC MRSL Conformance Testing Indicator
- ZDHC Performance InCheck Report Solution Provider
- ZDHC Training Provider
- ZDHC Approved Laboratory for Wastewater Testing
- SAC HIGG FEM Verifiers
- Amfori BEPI CMA Auditors



Difference between RSL vs MRSL

Restricted Substances List RSL

- Restriction of chemical substances in **final product**

Manufacturing Restricted Substances List MRSL

- Restricted chemical substances that are not intentionally used in production process
- But may be found as unintended contaminants within a commercial **chemical formulation**

Source: ZDHC – ZDHC Manufacturing Restricted Substance List: <https://mrsl.roadmaptozero.com/>





Manufacturing Restricted Substances List (MRSL)

Manufacturing Restricted Substances List (MRSL)



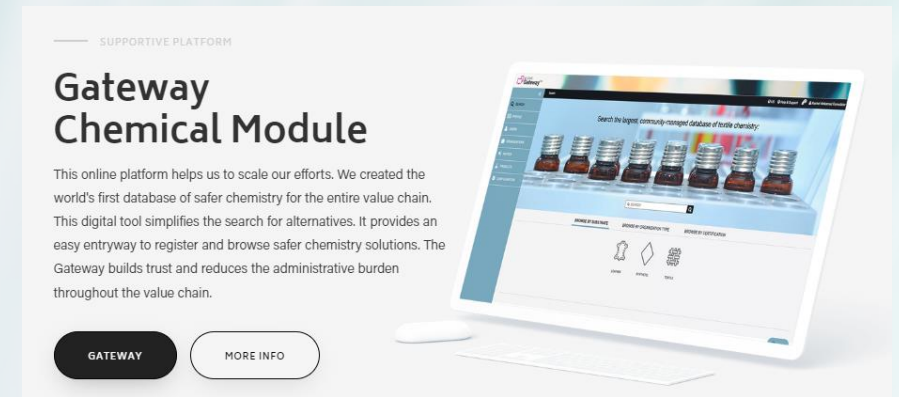
- ❑ Focus on chemical substances used in the facility
- ❑ ZDHC MRSL is one of the widely adopted industrial standard
 - A list of chemical substances banned from intentional use in facilities that process textile materials, synthetic leather, leather, and trim parts in textiles and footwear
 - Applicable to chemical formulations used for production, maintenance and support functions in the facility

Source: ZDHC – ZDHC Manufacturing Restricted Substance List: <https://mrsl.roadmaptozero.com/>



ZDHC MRSL and Conformance Chemicals

- ZDHC MRSL conformance chemical
Chemical product does not contain any MRSL substances above ZDHC MRSL threshold limit values
- Chemical company can register their products with the ZDHC Gateway – Chemical Module
- ZDHC MRSL conformance chemicals should be evaluated by a ZDHC approved independent 3rd party



<https://www.my-aip.com/ZDHCGateway/>

Source: ZDHC – ZDHC Manufacturing Restricted Substance List: <https://mrsl.roadmaptozero.com/>



ZDHC Gateway



GATEWAY

By Ø ZDHC

Chemical Module

Chemical Module is the world's first verified database of safer chemistry for the apparel and footwear industry. It helps facilities to evaluate the ZDHC MRSL conformance level of chemical formulations used in production processes and find safer alternatives.

Wastewater Module

Wastewater Module is a global online platform for facilities to register and share their wastewater test data. The platform helps facilities to benchmark their conformance towards ZDHC's Wastewater Guidelines and share data with their customers.

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2





ZDHC Gateway

Chemical Products registered in ZDHC gateway are visible to ZDHC brands and their supply chains

CONTRIBUTORS

Signatory Brands

TYPE CATEGORY LOCATION

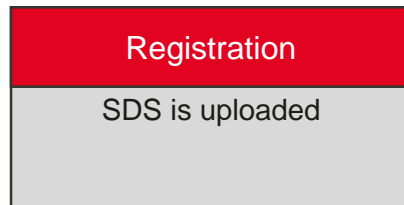
Textile and Footwear Industry

TYPE CATEGORY LOCATION

<https://www.roadmaptozero.com/allcontributors>



ZDHC MRSL and Conformance Chemicals



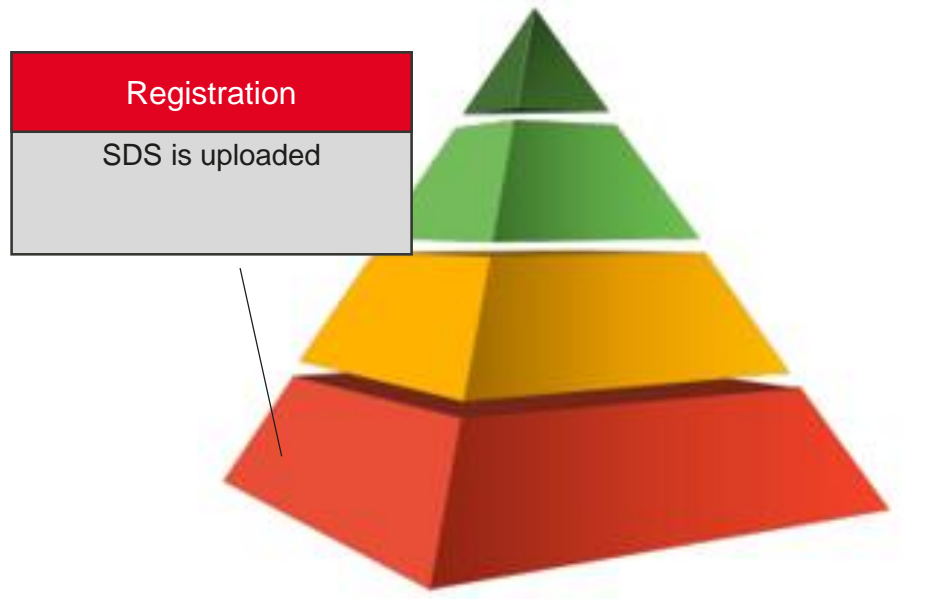
MRSL Conformance Level	Register Chemical Supplier with ZDHC Gateway – Chemical Module	Register Formulation Name and SDS with ZDHC Gateway – Chemical Module	Self-declaration of MRSL Conformity	Test report meeting ZDHC Quality Criteria (Annex A)	Third-party review of documentation against MRSL	Chemical Supplier Product Stewardship Reward	Chemical Supplier Site Visit
Registered	X	X					
1	Automatic when formulation certified by ZDHC accepted body		As required by certification body	Test report OR third-party review of documentation			
2				As required by certification body	X	X	
3				As required by certification body	X	X	X

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2





ZDHC MRSL Conformance Level



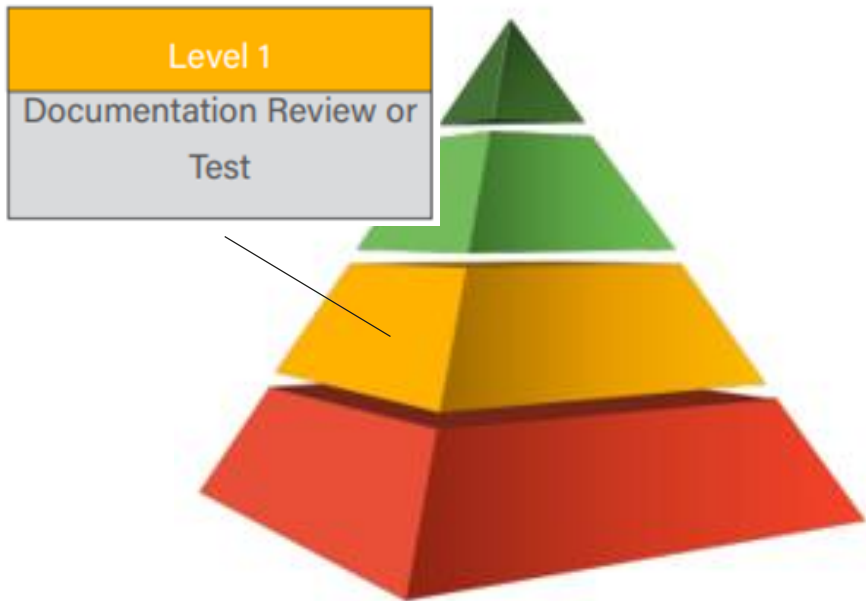
MRSL Conformance Level	Register Chemical Supplier with ZDHC Gateway – Chemical Module	Register Formulation Name and SDS with ZDHC Gateway – Chemical Module
Registered	X	X

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2





ZDHC MRSL Conformance Level



MRSL Conformance Level	Register Chemical Supplier with ZDHC Gateway – Chemical Module	Register Formulation Name and SDS with ZDHC Gateway – Chemical Module	Self-declaration of MRSL Conformity	Test report meeting ZDHC Quality Criteria (Annex A)	Third-party review of documentation against MRSL
Registered	X	X			
1	Automatic when formulation certified by ZDHC accepted body		As required by certification body	Test report OR third-party review of documentation	
2				As required	X

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2





ZDHC MRSL Conformance Level



MRSL Conformance Level	Register Chemical Supplier with ZDHC Gateway – Chemical Module	Register Formulation Name and SDS with ZDHC Gateway – Chemical Module	Self-declaration of MRSL Conformity	Test report meeting ZDHC Quality Criteria (Annex A)	Third-party review of documentation against MRSL	Chemical Supplier Product Stewardship Reward
Registered	X	X				
1	Automatic when formulation certified by ZDHC accepted body		As required by certification body	Test report OR third-party review of documentation		
2			As required by certification body	As required by certification	X	X

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2





ZDHC MRSL Conformance Level



MRSL Conformance Level	Register Chemical Supplier with ZDHC Gateway – Chemical Module	Register Formulation Name and SDS with ZDHC Gateway – Chemical Module	Self-declaration of MRSL Conformity	Test report meeting ZDHC Quality Criteria (Annex A)	Third-party review of documentation against MRSL	Chemical Supplier Product Stewardship Reward	Chemical Supplier Site Visit
Registered	X	X					
1	Automatic when formulation certified by ZDHC accepted body		As required by certification body	Test report OR third-party review of documentation			
2				As required by certification body	X	X	
3				As required by certification body	X	X	X

Source: ZDHC – ZDHC MRSL Conformance Guidance Version 1.2



ZDHC Approved Labs

- China - Shanghai
- China - Guangzhou
- India
- Bangladesh
- Taiwan
- Vietnam
- Hong Kong
- Turkey
- Italy
- Sri Lanka
- Indonesia
- Singapore
- Cambodia

13 BV Laboratories

ZDHC MRSL V2.0 Accepted Conformance Indicator



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Ø ZDHC

ZDHC Accepted* Conformance Indicators for Verification Against the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL)

(List Regularly Updated)

Rather than creating our own certification standard, it makes more sense to leverage those already available in the market. We do that by awarding ZDHC Accepted Status. To earn acceptance, a standard will be thoroughly assessed. We will see how well it indicates a formulation's conformance to the ZDHC MRSL. Those listed below have earned ZDHC Acceptance.

Disclaimers

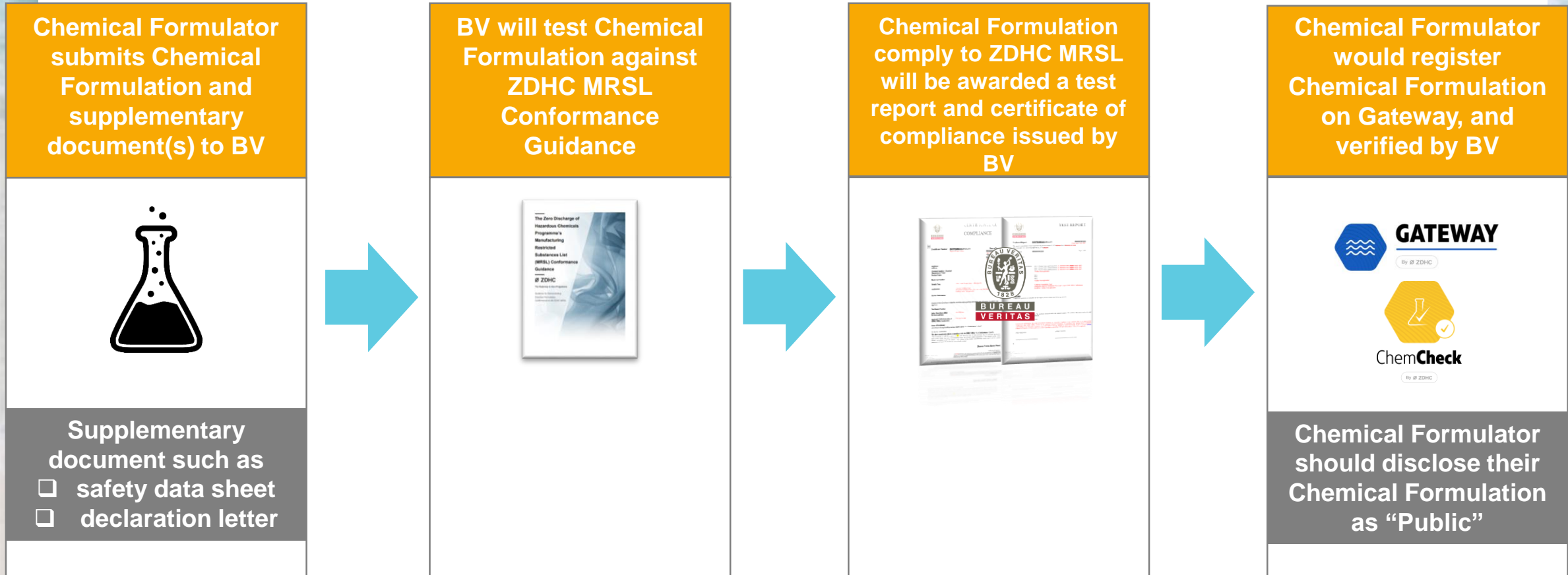
ZDHC has made every reasonable effort to make sure that the content and information contained in this list is as accurate and correct as possible at the time of publication. ZDHC makes no claims, promises, or guarantees about the accuracy, completeness, or adequacy of the contents of this document. In no event will ZDHC (and/or any related ZDHC majority owned legal entities) or the Directors or staff thereof be liable and ZDHC expressly disclaims any liability of any kind to any party for any loss, damage, or disruption caused:

- a) by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause and/or;
- b) from any use, decision made, or action taken or any other kind of reliance on the ZDHC Conformance Indicators by a reader or user of it and/or;
- c) for any results obtained or not obtained from the use ZDHC Accepted Conformance Indicators.



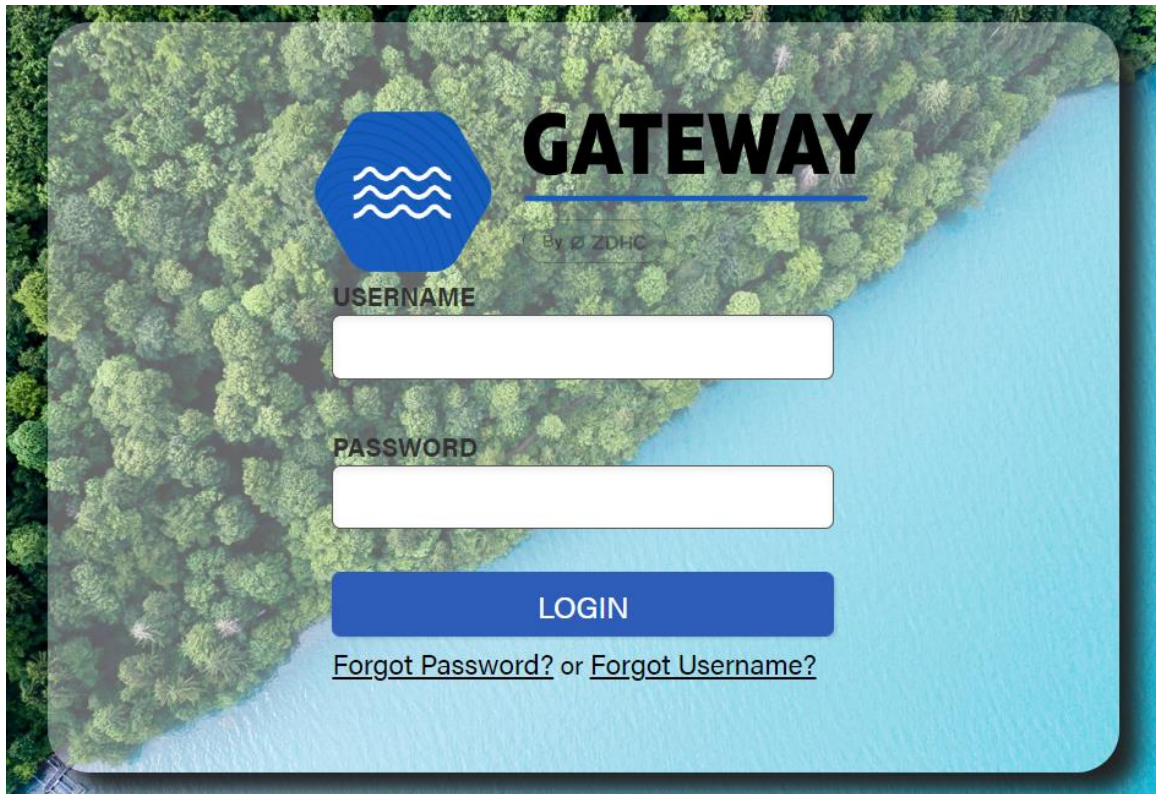


ZDHC MRSL Conformance Level 1 Certification Workflow





ZDHC MRSL Conformance Level 1 Certification Workflow



Chemical Formulator to access to ZDHC Gateway

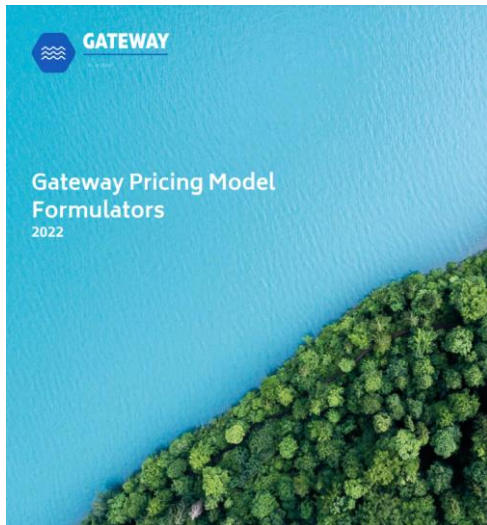
- a. Invited by a ZDHC Contributor of a friends of ZDHC
- b. Request an invitation to the ZDHC Gateway via gateway@zdhc.org

<https://knowledge-base.roadmaptozero.com/hc/en-gb/articles/4404767689489-Getting-a-ZDHC-Gateway-account-Formulator->



ZDHC MRSL Conformance Level 1 Certification Workflow

What are the costs of joining the ZDHC Gateway? (Formulators)



Get started in two easy steps

1. When registering, simply indicate the number of products you intend to publish on the next year. You will be automatically assigned to one of the following subscription categories:

Number of Products to Publish	Annual Access Fee (€)
0-49	1100
50-149	1600
150-499	2100
500-1499	2700
1500-3000	3800
>3001	6000

*Fees are annual and will be charged in EURO€.

3. The Annual Product Fee, which is applied on top of the Annual Access Fee, must be submitted before your products are published. As seen in the chart below, publishing products with a higher ZDHC MRSL Conformance level are free of charge.

Product ZDHC MRSL Conformance Level	Annual Product Fee per published product (€)
Registered	21
1	21
2	FREE
3	FREE

*Fees are annual and will be charged in EURO€.

https://knowledge-base.roadmaptozero.com/hc/en-gb/article_attachments/4415483146513/ZDHC_Gateway_Pricing_Model_Formulators_pdf.pdf



ZDHC MRSL Conformance Submission and Testing Procedure in BV

- Fill in test request form (TRF) with clear indication of sample description and related information;
- Package sufficient test sample (50mL) into sample tube;
- Attach TRF with sample and send SDS of each sample to BV for review;
- Shipping sample to BV Address;
- Notify BV the Sample Description and Shipping Tracking Number for ease of tracking;
- BV arrange screening and confirmation (if applicable) tests according to TRF;
- Issue ZDHC MRSL report.





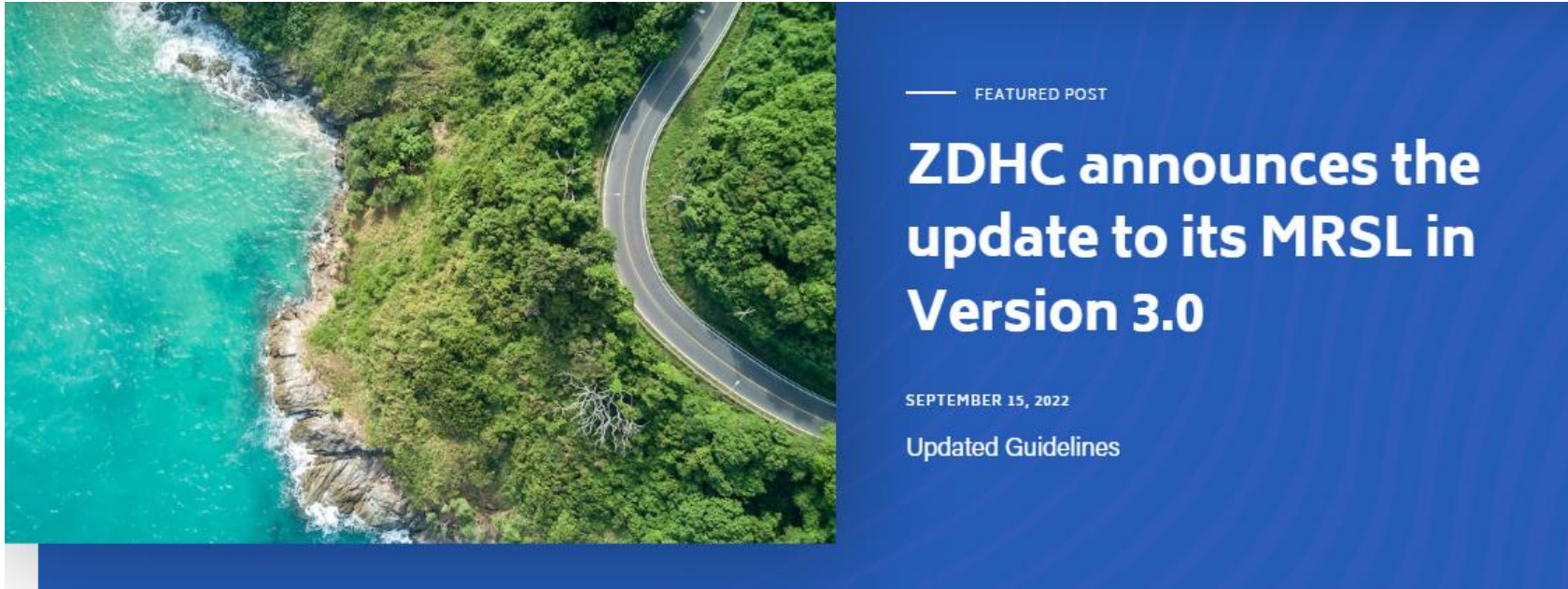
ZDHC MRSL Conformance Certification by Bureau Veritas

- Price for screening method of current ZDHC MRSL V2.0 + (DMFa & Formaldehyde) is **USD420** per sample;
- The price for screening method of ZDHC MRSL V3.0 may be increased no more than 5%.





Upcoming Changes



The updated ZDHC MRSL V3.0 will be published by ZDHC on **1 November 2022** with a transition period of 12 months for effective implementation by all stakeholders.

<https://www.roadmaptozero.com/post/zdhc-announces-the-update-to-its-mrsl-in-version-3-0>

BV OFFICE CONTACTS



Inquiry

Ms Carmen Zhao

yinge.zhao@bureauveritas.com

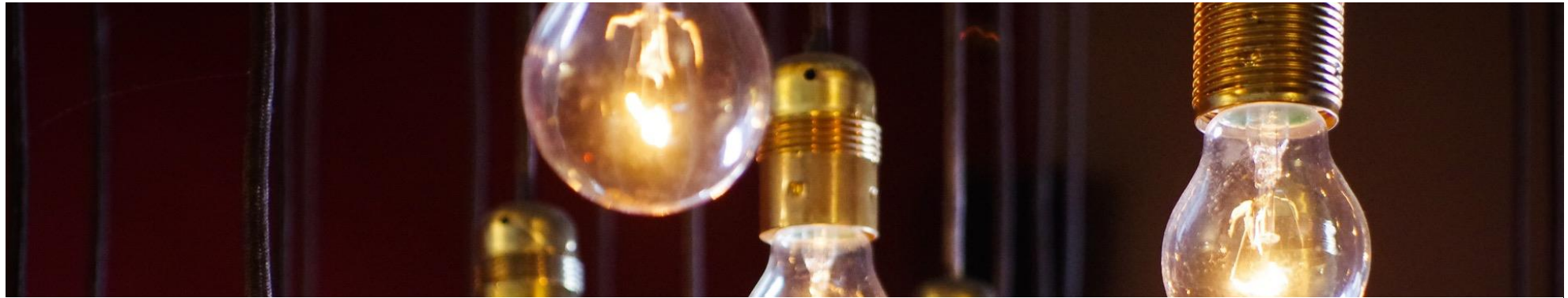


Visit our page at

<https://www.cps.bureauveritas.com/needs/sustainable-chemical-management>



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Questions 問答時間?





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