ZDHC

ZDHC MRSL V4.0 Industry Implementation Approach

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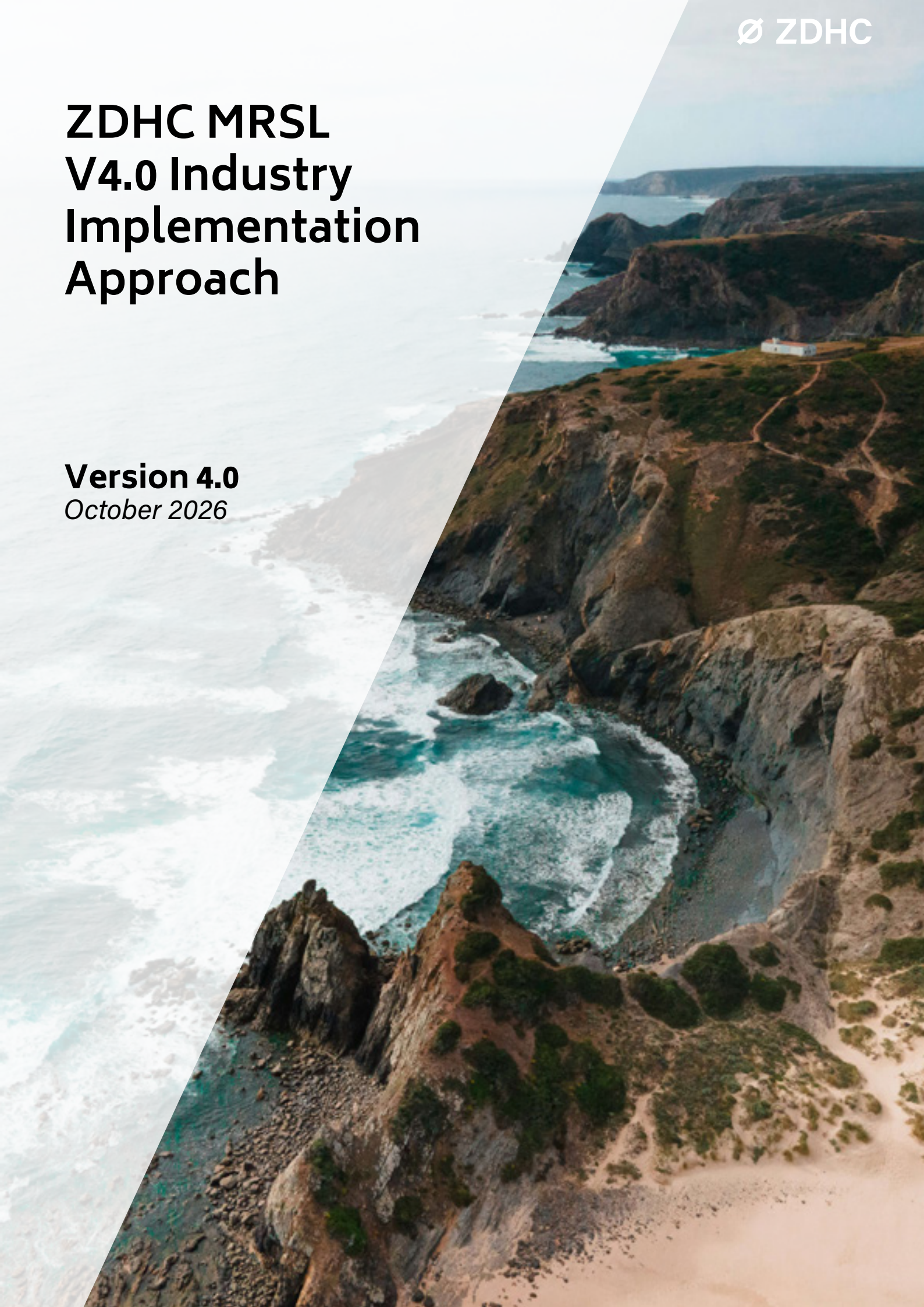

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Introduction

The ZDHC Manufacturing Restricted Substances List (MRSL) is regularly reviewed and updated to reflect advances in scientific knowledge, regulatory developments, analytical testing capabilities and the availability of safer chemical alternatives. ZDHC MRSL V4.0 builds on V3.1, released in 2023.

The ZDHC MRSL V4.0 represents a significant update, expanding the number of restricted chemical groups and the number of listed substances. It also introduces new or revised analytical test methods and more stringent limits of quantification for selected substances.

These changes aim to strengthen the protection of people and the environment, support the progressive substitution of hazardous substances and improve the reliability of MRSL conformance assessments.

The next revision, the ZDHC MRSL V5.0, is anticipated in 2028, consistent with ZDHC's intended two-year revision cycle.

Refer to the **ZDHC MRSL Scope** document to understand which stakeholders are in or out of scope.

SECTION 1

Purpose and scope

This guide explains how organisations can prepare, adopt and implement the ZDHC Manufacturing Restricted Substances List V4.0. It brings the launch milestones and stakeholder actions into one plan so that certifiers, chemical formulators, suppliers and brands can coordinate their work.

The transition to ZDHC MRSL V4.0 starts on 1 November 2026 and will be fully executed by 1 June 2028.

All organisations should start by assessing the implications of ZDHC MRSL V4.0 for their operations and understanding their role in ensuring a successful transition. To help stakeholders understand the changes and prepare for the transition, ZDHC will host a dedicated webinar on the ZDHC MRSL V4.0 on 11 November 2026, with a recording later available on the ZDHC Academy.

Section 2 summarises the key impacts and expectations for each stakeholder group; Sections 3, 4, 5 and 6 provide further detail on the impacts and expectations for each group.

All stakeholders are encouraged to formally integrate the ZDHC MRSL V4.0 into their organisational policies and practices and reflecting their commitment through clear references to the requirement in relevant internal and external communications, such as corporate websites and supplier requirements.

Organisations shall define the scope of ZDHC MRSL V4.0 adoption according to their business activities and specific needs. Where justified, organisations may exclude certain applications, such as specialised workwear (e.g. hospital, police or military uniforms) and personal protective equipment (e.g. firefighting, combat or motor-racing gear).

Beyond formal adoption, implementation involves translating this commitment into practical actions. Depending on the organisation's role and activities, these may include training, certification, adjustments to purchasing practices, chemical inventory management and monitoring of ZDHC MRSL conformance.

SECTION 2

Launch milestones and transition periods

Table 1: Overall ZDHC MRSL V4.0 Implementation Timelines

Date	Milestone / Stakeholder	Actions and Practical Significance
1 November 2026	**TRANSITION PERIOD BEGINS**	
	Certifiers	Review the new requirements and prepare applications for ZDHC MRSL V4.0 approval through the Solution Provider Platform (SPP), covering the relevant Conformance Levels in accordance with ZDHC Chemicals to Zero - Foundational (previously ZDHC MRSL Conformance Guidance V2.1).
	Chemical Formulators	Review formulation portfolios and identify products requiring recertification against ZDHC MRSL V4.0.
	Suppliers	Review chemical inventories, engage chemical formulators to confirm V4.0 conformance, identify formulations that will become non-conformant and plan their progressive phase-out. Identify substances requiring Emission and Exposure Controls.
	Brands and Vendors	Communicate the transition timeline and new requirements to supply chain partners, encourage participation in ZDHC webinars and training and establish implementation targets aligned with the transition period.
15 December 2026	**CERTIFIER APPLICATIONS OPEN**	
	Certifiers	Begin submitting applications for ZDHC MRSL V4.0 approval through the Solution Provider Platform (SPP), covering the relevant Conformance Levels in accordance with ZDHC Chemicals to Zero - Foundational (ZDHC MRSL Conformance Guidance V2.1).

Table 1: Overall ZDHC MRSL V4.0 Implementation Timelines

Date	Milestone / Stakeholder	Actions and Practical Significance
1 February 2027	**FORMULATION RECERTIFICATION BEGINS**	
	ZDHC	Publishes the list of ZDHC Approved MRSL V4.0 Certifiers.
	Chemical Formulators	Begin recertifying formulations against the ZDHC MRSL V4.0 through ZDHC Approved Certifiers - MRSL and publishing certified products on the ZDHC Gateway at the appropriate Conformance Levels.
	Suppliers	Begin prioritising V4.0 certified formulations in purchasing decisions and progressively deplete existing stocks of formulations that will no longer conform to MRSL V4.0.
	Brands and Vendors	Monitor suppliers' transition progress through InCheck, which displays ZDHC MRSL V3.1 and V4.0 conformance side by side during this period.
1 November 2027	**FORMULATION RECERTIFICATION PERIOD ENDS**	
	Chemical Formulators	Complete the recertification of formulations published on the ZDHC Gateway against MRSL V4.0.
1 June 2028	**SUPPLY CHAIN IMPLEMENTATION PERIOD ENDS**	
	Suppliers	Complete the transition of chemical inventories to ZDHC MRSL V4.0 conformant formulations, including the full depletion of existing stocks that are no longer conformant.
	ZDHC Gateway	All formulations published on the ZDHC Gateway are certified against ZDHC MRSL V4.0. ZDHC archives formulations certified against ZDHC MRSL V3.1 and no longer makes them visible on the ZDHC Gateway. InCheck reports list these formulations as non-conformant.

SECTION 3

ZDHC Approved Certifiers - MRSL

Certifiers enable the transition by aligning their certification systems with ZDHC MRSL V4.0 and the applicable ZDHC Chemicals to Zero - Foundational (previously ZDHC MRSL Conformance Guidance), obtaining the relevant ZDHC approval and explaining the certification route to formulators. The table below sets out the key steps and timing of the approval process.

Table 2: ZDHC MRSL V4.0 Implementation Timeline For Certifiers

Date	Milestone / Stakeholder	Actions and Practical Significance
1 November 2026	**TRANSITION PERIOD BEGINS**	
	Certifiers	Review ZDHC MRSL V4.0 and the applicable ZDHC Chemicals to Zero - Foundational. Identify necessary updates to internal procedures, assessment criteria and certification documentation. Prepare approval applications through the Solution Provider Platform (SPP), covering the relevant ZDHC MRSL Conformance Levels.
15 December 2026	**CERTIFIER APPLICATIONS OPEN**	
	Certifiers	Submit ZDHC MRSL V4.0 approval applications through the Solution Provider Platform (SPP) in good time, specifying the relevant Conformance Levels. Provide clear, current supporting evidence and respond promptly to requests from ZDHC.
1 February 2027	**FORMULATION RECERTIFICATION BEGINS**	
	Certifiers	ZDHC publishes the list of ZDHC Approved Certifiers - MRSL approved for V4.0. Once ZDHC approval has been granted and the agreement with ZDHC signed, begin offering V4.0 certification services and communicate readiness to customers.
During transition and thereafter	**CERTIFICATION SERVICES CONTINUE**	
	Certifiers	Issue ZDHC MRSL V4.0 certificates only within the scope of the approval granted by ZDHC, including the applicable Conformance Levels.

SECTION 4

Chemical formulators

Use the transition period to review the product portfolio together with the ZDHC Approved Certifier - MRSL, identify formulations impacted by ZDHC MRSL V4.0 and determine for each whether a conformant alternative is already available, whether one can be developed through reformulation and certified, or whether the formulation should be withdrawn.

For formulations impacted by ZDHC MRSL V4.0 that require new certification, formulators should confirm, before committing to delivery or certification timelines with customers, that their ZDHC Approved Certifier - MRSL is approved to certify against V4.0 and can complete the assessment within the required timeframe.

Once certified, publish the formulation on the ZDHC Gateway following the applicable process. Share the Gateway product ID, certification status and expected availability date with customers so they can update their recipes and purchasing plans in good time.

Inform customers early about any formulations that contain newly restricted substances and will be phased out, so they can plan alternatives in time.

Reviewing the Candidate List can support forward planning, for example by flagging formulations that may need attention — in future. Candidate List status is not a confirmed restriction, but early awareness helps the industry prepare and move forward together.

Formulator implementation timeline

Table 3: ZDHC MRSL V4.0 Implementation Timeline for Formulators

Date	Milestone / Stakeholder	Actions and Practical Significance
1 November 2026	**TRANSITION PERIOD BEGINS**	
	Chemical Formulators	Review ZDHC MRSL V4.0 and the applicable ZDHC Chemicals to Zero - Foundational, including requirements for the relevant Conformance Levels. Assess formulation portfolios to identify substances newly restricted under V4.0 and products requiring recertification. Prepare to withdraw formulations that will no longer conform and begin developing or identifying non-regrettable alternatives.
1 February 2027	**FORMULATION RECERTIFICATION BEGINS**	
	Chemical Formulators	Begin recertifying relevant formulations against ZDHC MRSL V4.0 through ZDHC Approved Certifiers - MRSL. Publish certified formulations on the ZDHC Gateway at the appropriate ZDHC MRSL Conformance Levels.
1 November 2027	**FORMULATION RECERTIFICATION PERIOD ENDS**	
	Chemical Formulators	Complete recertification of formulations published on the ZDHC Gateway against ZDHC MRSL V4.0 and Chemicals to Zero - Foundational. From this date, only formulations certified against these requirements can be newly uploaded to the ZDHC Gateway.
1 June 2028	**SUPPLY CHAIN IMPLEMENTATION PERIOD ENDS**	
	ZDHC Gateway	Formulations certified against ZDHC MRSL V3.1 are archived and unpublished on the ZDHC Gateway, so they are no longer visible in Gateway searches. They remain identifiable as non-conformant in Performance InCheck reports.

SECTION 5

Suppliers

The following timeline outlines the key steps facilities should take to transition their chemical inventory to ZDHC MRSL V4.0. Facilities should work closely with chemical suppliers to confirm formulation conformance, plan necessary replacements and update their chemical inventory records throughout the transition period.

Transition begins

From 1 November 2026

Use the facility's existing chemical inventory list as the starting point for planning the transition to the ZDHC MRSL V4.0. Review the available information to identify chemicals requiring follow-up. Consider existing stock quantities, monthly usage and expiry dates to understand how long current stock may last, particularly for expensive, slow-moving or specialist chemicals.

Engage chemical suppliers and formulators to determine the transition action required for each formulation:

- **Formulations expected to remain conformant:** Confirm with the relevant chemical supplier whether the existing formulation can be certified against V4.0 without changes to its composition and when its updated certification is expected to be available on the ZDHC Gateway. These formulations do not need to be replaced or phased out.
- **Formulations expected to be non-conformant with V4.0:** Work with the relevant chemical supplier to identify suitable V4.0 conformant alternatives and their expected certification and availability dates. Consider existing stock and consumption rates when planning the transition. Where alternatives may affect performance or processing conditions, plan trials and any necessary changes to recipes, operating parameters or purchasing specifications.
- **Formulations with an uncertain V4.0 status:** Request clarification from the chemical supplier or formulator and agree on when they will provide updated information. Avoid unnecessary replacement decisions until the formulation's status is clarified.

For formulations containing substances that meet the conditions for Emission and Exposure Control (EC*), identify and document their use, assess the availability of suitable alternatives and establish a phase-out plan. Where no suitable alternative is available or a longer phase-out period is necessary, continued use may be temporarily tolerated, subject to appropriate Emissions and Exposure Controls. Such use does not constitute ZDHC MRSL conformance.

Formulation recertification period begins

From 1 February 2027

As V4.0 certified formulations become available on the ZDHC Gateway, prioritise these for new purchases. For formulations that remain conformant with V4.0, confirm the updated certification on the ZDHC Gateway and update ZDHC MRSL conformance information in the chemical inventory. Existing stock of the same unchanged formulation can continue to be used without replacement, provided the chemical supplier confirms that the updated certification applies to it.

For formulations expected to be non-conformant with V4.0, begin introducing suitable alternatives when and if they are available, planning any necessary production trials and purchasing changes. Plan the use and phase-out of existing stock and avoid unnecessary additional purchases of formulations that will need to be replaced.

Where alternatives are not yet available, maintain contact with the chemical supplier to understand expected availability.

End of formulation recertification period

From 1 November 2027

For new purchases, select only formulations with V4.0 conformance demonstrated on the ZDHC Gateway, including existing formulations with updated certification and newly developed alternatives.

Continue phasing out non-conformant formulations and managing remaining stock and document any outstanding challenges in finding suitable alternatives.

End of supply chain implementation period

By 1 June 2028

Suppliers should aim to complete their transition to ZDHC MRSL V4.0 by 1 June 2028, ensuring that they have:

- Confirmed updated V4.0 certification for existing formulations that remain conformant.
- Introduced suitable alternatives for formulations that do not meet V4.0 requirements.
- Completed the phase-out of formulations that are non-conformant with V4.0.
- Documented non-conformant formulations that meet the conditions for Emission and Exposure Control (EC*) that are still in use, including the justification for continued use, implemented Emission and Exposure Controls and defined phase-out timelines.
- Updated the relevant ZDHC MRSL conformance information in the chemical inventory list.

NOTE: Additional guidance for substances subject to Emission and Exposure Control

Some solvents and chemical substances identified in ZDHC MRSL V4.0 are subject to Emission and Exposure Control provisions. These substances are classified as non-conformant under the ZDHC MRSL. However, ZDHC recognises that suitable, commercially available alternatives may not yet exist for some applications and that their use may therefore continue beyond the general supply chain implementation period ending on 1 June 2028. In such cases, facilities should implement appropriate measures to control emissions and worker exposure while working towards reducing and eventually phasing out these substances.

Where EC* substances are used, either individually or as components of chemical formulations, facilities should:

1) **Identify relevant chemicals:** Identify restricted substances subject to EC*, including formulations containing these substances and record their presence and EC* status in the chemical inventory.

2) **Understand current usage:** Measure and record current consumption and where the chemicals are used (application areas) to establish a baseline and identify opportunities for reduction.
3) **Review control measures:** Review existing controls and implement appropriate measures to minimise emissions and worker exposure, such as closed-loop processes or other suitable engineering and administrative controls.
4) **Plan reduction and phase-out:** Engage chemical suppliers to identify technically suitable alternatives and develop a phase-out plan with measurable reduction targets and timelines. Where immediate substitution is not technically feasible, continue exploring alternatives and review the plan as suitable solutions become available.
5) **Monitor progress:** Track usage against the baseline, review the effectiveness of control measures and monitor progress toward reduction and phase-out targets using existing chemical management records.

At the end of the supply chain implementation period on 1 June 2028, facilities should identify any remaining formulations containing EC* substances and continue implementing appropriate controls, monitoring and phase-out plans until suitable alternatives can be introduced.

Supplier implementation timeline

Table 4: ZDHC MRSL V4.0 Implementation Timeline for Suppliers

Date	Milestone / Stakeholder	Actions and Practical Significance
1 November 2026	**TRANSITION PERIOD BEGINS**	
	Suppliers	Review chemical inventories and existing stocks. Engage chemical suppliers to confirm V4.0 conformance and identify formulations requiring updated certification, further assessment or replacement. Identify formulations that will become non-conformant and plan their progressive phase-out, including any necessary inventory and purchasing adjustments. Identify substances requiring Emission and Exposure Controls.
1 February 2027	**FORMULATION RECERTIFICATION BEGINS**	
	Suppliers	Prioritise purchasing formulations certified against ZDHC MRSL V4.0 as they become available on the ZDHC Gateway. Investigate suitable alternatives for formulations that will no longer conform, begin managing their phase-out and prioritise depletion of existing non-conformant stocks.
1 November 2027	**FORMULATION RECERTIFICATION PERIOD ENDS**	
	Suppliers	Purchase only formulations with ZDHC MRSL V4.0 conformance demonstrated on the ZDHC Gateway. Continue using existing stocks of unchanged formulations confirmed as V4.0 conformant, while progressively phasing out formulations that are no longer conformant.
1 June 2028	**SUPPLY CHAIN IMPLEMENTATION PERIOD ENDS**	
	Suppliers	Complete the transition of chemical inventories to ZDHC MRSL V4.0, including full depletion of stocks that are no longer conformant and updates to chemical inventory records. Identify any remaining formulations containing restricted substances subject to Emission and Exposure Control and continue implementing appropriate controls and phase-out plans.

SECTION 6

Brands and vendors

The following timeline outlines the key steps brands and vendors should take to transition their supplier base's chemical inventories to ZDHC MRSL V4.0. Aligning with the proposal is key to avoiding additional or conflicting requirements beyond what the ZDHC brand community expects supply chain partners to undertake.

Transition begins: Update and communicate policies, trigger supplier activities

Update and communicate commitments and policies

As indicated in the Brands Roadmap to Zero, brands are encouraged to review, update or amend their commitments and policies. Accordingly, changes should be made to internal documents, public resources and supplier communication, requirements or manuals. It is recommended to inform suppliers and other business partners about the changes made.

Encourage supplier capacity building for implementation.

Brands should explain the transition to their supply chain partners and encourage supplier capacity building. Essentially, the use of ZDHC InCheck and ZDHC Gateway will not change in the ZDHC MRSL implementation. But suppliers need to undertake actions as outlined in the chapter above.

From the start of the transition, brands should share this document as the main ZDHC resource for managing the transition and its milestones and refer to the ZDHC Academy for webinars and training modules.

Update and communicate clear supplier requirements

Brands should review, update or amend **clear supplier requirements** and ensure these are communicated to suppliers. We encourage brands to get clarity on their suppliers' understanding of requirements and to provide additional guidance or means of capacity building. Main supplier requirements should address the suppliers' commitments, purchasing policies and ensure the milestones for transitioning to a ZDHC MRSL V4.0 conformant inventory are met.

Monitor Suppliers' progress via InCheck

1 February 2027 - 1 November 2027

Use the transition period to **monitor supplier readiness and performance** and address gaps in chemical product availability, certification and process validation. Use InCheck monitoring, which will list ZDHC MRSL V3.1 and V4.0 conformance side by side.

The percentage of ZDHC MRSL V4.0 certified chemicals should increase continuously as formulations undergo recertification. Encourage suppliers to use up existing stock by 1 June 2028 rather than dispose of ZDHC MRSL V3.1 certified chemicals that are not recertified by 1 November 2027. Because InCheck monitoring can provide aggregated information on suppliers' inventories, brands can use these insights to support suppliers in working with chemical suppliers or formulators to recertify chemical products.

Where a brand or vendor also formulates chemicals or operates facilities, it should also apply the actions for those roles.

End of supply chain implementation period

By 1 June 2028

Brands and vendors should support suppliers in completing their transition to ZDHC MRSL V4.0. By 1 June 2028. InCheck reports will only show ZDHC MRSL V4.0 certified chemicals as conformant.

Where brands find suppliers using non-conformant formulations that meet the conditions for Emission and Exposure Control (EC*), brands should ask for respective documentation, including the justification for continued use, implemented Emission and Exposure Controls and defined phase-out timelines.

Table 5: ZDHC MRSL V4.0 Implementation Actions For Brands

Date	Milestone / Stakeholder	Actions and Practical Significance
1 November 2026	**TRANSITION PERIOD BEGINS**	
	Brands and Vendors	Share the ZDHC MRSL V4.0 transition schedule, brand-specific requirements and expectations with supply chain partners. Designate a contact for questions, support supplier participation in ZDHC webinars and training and establish implementation targets aligned with the transition timeline. Update internal and external policies, supplier requirements and guidance to reference ZDHC MRSL V4.0 or "ZDHC MRSL in its latest version".
1 February 2027	**FORMULATION RECERTIFICATION BEGINS**	
	Brands and Vendors	Monitor suppliers' transition progress through InCheck, which displays ZDHC MRSL V3.1 and V4.0 conformance side by side during this period. Support suppliers in engaging chemical suppliers and formulators to recertify chemical products or identify alternatives and phase out formulations that cannot be recertified against ZDHC MRSL V4.0.
1 November 2027	**FORMULATION RECERTIFICATION PERIOD ENDS**	
	Brands and Vendors	Monitor progress using InCheck. Reinforce the expectation that suppliers purchase only formulations with V4.0 conformance demonstrated on the **ZDHC Gateway**, while allowing continued use of existing stocks of unchanged formulations confirmed as V4.0 conformant, in line with supplier guidance.
1 June 2028	**SUPPLY CHAIN IMPLEMENTATION PERIOD ENDS**	
	Brands and Vendors	Work with suppliers to confirm completion of the transition to ZDHC MRSL V4.0, including the phase-out and depletion of non-conformant formulations and updates to chemical inventory records. Collaborate to identify any remaining formulations containing restricted substances subject to Emission and Exposure Controls (e.g. solvents) and support the continued implementation of appropriate controls and phase-out plans.