

Ecodesign Requirements for Substances of Concern under the ESPR

Recommendations on the JRC methodology (JRC143683) for complex electrical and electronic products

Introduction

With regard to the ongoing activities and discussions around the implementation of the SoC concept under ESPR, ZVEI remains concerned that the current SoC concept is too broad, unclear and not workable for complex products. ZVEI supports meaningful and proportionate measures to improve transparency on substances of concern where they are feasible for complex products and deliver clear added value. The current approach, however, risks creating multiple inconsistent definitions and reporting obligations across product groups, leading to significant additional burdens in data collection without clear added value.

These concerns have been raised repeatedly throughout the consultation process, including in the Joint Industry Letter of 10 September 2025. In ZVEI's view, they remain valid, and should be carefully reflected in the ongoing development of the methodology and in any concrete legislative proposals.

ZVEI continues to support the principle that substance information for articles should be anchored in the established chemicals regulatory framework, in particular REACH. Substance-related requirements under the ESPR should be built on existing legal concepts, established supply-chain information flows and proven regulatory procedures, rather than creating a parallel chemicals information system.

Against this background, ZVEI intends to contribute constructively to the ongoing discussion on the concrete proposals currently under consideration, including the JRC methodology¹ for identifying and assessing Substances of Concern and the draft delegated act for commercial dishwashers². However, the proposed methodology has not yet demonstrated its suitability and practical applicability for complex products, multi-tier international supply chains and existing regulatory information systems.

Before the methodology is used as a basis for binding information or performance requirements in delegated acts, it must provide a sufficiently robust basis for requirements that are practical, proportionate and capable of delivering a clear sustainability benefit. This requires reliable information from the supply chain and a coherent relationship with the existing regulatory framework. New requirements should only be introduced where there is a solid data basis and practical added value. Duplication and disproportionate burdens on European industry must be avoided.

ZVEI's recommendations on the JRC methodology are based on the following five core principles:

- **No downstream reporting without corresponding upstream information duties.** Any mandatory substance-information requirement for specific product groups under the ESPR must be accompanied by a corresponding mandatory obligation to make the relevant information available and pass it on consistently throughout the entire supply chain, building on the established communication obligations under REACH Article 33(1). Where a delegated act introduces substance-information requirements beyond existing legal communication duties, it must establish corresponding mandatory upstream information obligations, including under Article 38 ESPR. Downstream manufacturers must not be required to generate or reconstruct information that upstream actors are not correspondingly required to provide.
- **Harmonisation across product groups.** A harmonised approach across all product categories is essential. Substance lists, (priority) components, thresholds, data formats, reporting channels and verification

¹ JRC Publications - Method for the identification and tracking of substances of concern in products and for the preparation of restriction measures on the use of substances in products

² [espr_commercial_dishwashers_draft_ed_requirements_annexes_update.pdf](#)

requirements must be aligned horizontally across product groups and delegated acts. The same component must not be assessed or declared differently depending on the final product. In addition, to ensure that substance reporting remains practical and manageable, SoC lists should be short, closed, stable, and harmonised across product groups and delegated acts.

- **No use case, no data.** Substance data should only be collected where a concrete and actionable information need and a product-specific sustainability benefit have been identified. The purpose, recipient and intended use of the information should be defined before new data requirements are introduced. Data collection for its own sake does not add value but creates significant costs and administrative effort throughout the supply chain.
- **Start simple and phase in requirements step-by-step (DIGITISE – PROVE – EXPAND).** For complex products, a limited and supply-chain-feasible step-by-step approach is required. SoC(b)¹ should not automatically lead to extensive new article-level obligations. Implementation should begin with information already available through established systems, such as SoC(a) under Article 33 of REACH. First, make existing SoC(a) information communicated under REACH Article 33 digitally available and reusable. Second, prove the concrete user, decision, measurable sustainability benefit, closed substance scope, common reference unit, reliable upstream data, standardised format, verification method and equal enforceability. Only then expand requirements selectively. In ZVEI's view, Article 7(6) ESPR provides a legally defensible basis for such a phased approach, provided that it is justified and reviewed at product-group level. This avoids extensive new data-generation duties before their relevance, feasibility and proportionality have been demonstrated.
- **No parallel chemicals law.** ESPR should complement, not duplicate or circumvent, REACH, CLP, RoHS or POPs. Substance-related requirements under the ESPR should address a clearly demonstrated product-specific sustainability objective and should not reopen or effectively override regulatory decisions taken under the established chemicals regulatory framework.

The following eleven detailed recommendations set out the minimum conditions that ZVEI considers necessary for the further development and application of SoC requirements for complex products under the ESPR:

1 Prevent ESPR from becoming parallel chemicals law

ZVEI has previously advocated a coherent EU approach to transparency on substances in articles, building on established REACH concepts and information flows. We acknowledge that the Commission does not currently intend to revise REACH. The immediate priority is therefore to ensure that ESPR remains coherent with existing rules and does not develop into an inconsistent parallel substance information regime. Any additional requirement must demonstrate necessity, practical use, measurable circular-economy benefit, supply-chain availability and enforceability. ESPR should not reopen substance questions that have already been decided under the relevant chemical legislation; it should only intervene where there is a distinct product sustainability need. Hazard classification, exposure assessment and chemical risk management should remain within the established framework of CLP, REACH, the POPs Regulation and, for electrical and electronic equipment, RoHS.

ESPR should therefore complement this established chemicals regulatory framework, not duplicate, bypass or circumvent existing substance assessments and risk-management decisions. Existing restrictions, exemptions, authorisations, thresholds and transition periods must remain fully effective and should not be contradicted or effectively overridden through product-specific ESPR requirements.

Substance-related recycling issues should only be addressed where a distinct, product-specific and non-duplicative circular-economy need is demonstrated on the basis of actual waste streams and established industrial treatment routes. Substance-related issues with a broad cross-product scope should be addressed within horizontal legislation such as REACH or POPs rather than through ESPR.

ESPR should add value, not duplicate existing rules and data flows.

2 Reconsider the concept of priority components

ZVEI does not support product-group-specific priority-component lists as an additional regulatory classification layer for SoC information requirements. If each Preparatory Study identifies its own set of priority components,

identical parts could be subject to different classifications and information requirements depending on the final application. This is particularly problematic for components used in multiple products and would increase complexity throughout multi-tier supply chains rather than provide meaningful simplification.

If the concept of priority components in the context of substance information is nevertheless retained, it should follow a common horizontal logic across product groups to effectively limit the scope of components subject to SoC reporting. Their selection should also reflect whether the requested substance information can support relevant decisions on reuse, repair, separation, or recycling within the applicable product and waste streams. The scope should be closed and clearly defined. Open-ended formulations such as “including but not limited to” would undermine the intended simplification, as manufacturers could not determine conclusively which components are covered.

Any priority-component approach should therefore serve as a genuine means of limiting SoC information requirements to information that provides a demonstrable sustainability benefit, rather than creating an additional product-specific classification and reporting layer. A (priority) component-level concentration threshold also requires information that is not normally transmitted for purchased articles: the mass of the designated component and, where the SoC is contained in a sub-article, the mass and substance concentration of that sub-article. The calculation cannot be reconstructed reliably for purchased assemblies, changing suppliers, multiple sourcing, different batches, component variants and long-term spare parts. A priority-component approach therefore does not reduce burden unless component boundaries and reference units are harmonised and upstream suppliers are required to transmit the necessary substance and mass data in a standardised, reusable and digitised format.

3 Harmonise requirements across all product groups and studies

A common horizontal framework should govern SoC information requirements across product groups and delegated acts. The same substance or component should not be subject to different declaration logic solely because it is used in different final products. Preparatory studies should therefore apply consistent principles for substance scope, component definitions, thresholds or further reporting requirements, while allowing product-specific differences only where these are justified by a clearly demonstrated sustainability benefit. Supply chains for materials, components, intermediate products and final products are interconnected across sectors and product groups. Any mandatory requirement to provide substance information must therefore use closed harmonised lists, common reference units and reusable information flows across products and supply-chain levels. Product-specific additional information has a distinct benefit only where the relevant product, material, waste or recycling stream is also handled separately and the information supports a concrete decision. In mixed collection, dismantling, shredding, sorting or recycling streams, such added value must be demonstrated rather than assumed.

This is particularly important for standard components used across many different products. An electric motor, for example, may be placed on the market as a regulated product in its own right and at the same time be incorporated into a pump, a commercial dishwasher or another complex product. Without horizontal harmonisation, the same substance information for the same physical component could be subject to different product-specific requirements depending solely on the final application (e.g. Regulation (EU) 2019/1781 on electric motors and variable speed drives, Regulation (EU) 2024/1834 on industrial fans, the draft ecodesign measure for water pumps and the draft ESPR measure for commercial dishwashers). This would multiply assessment, documentation and implementation efforts throughout the supply chain, even though the substance composition of the component itself remains unchanged. Substance information generated for the same component should be reusable across different products, product groups and delegated acts. Where component-specific SoC information requirements have already been established under a dedicated ESPR measure, the corresponding substance information should be recognised as sufficient for downstream applications and should not be reassessed solely because the component is incorporated into another product. Additional information should only be required where the final product application creates a specific and demonstrated need for further information.

The Commission should also define from the outset how delegated acts for materials, components or intermediate products and final products interact. Their sequencing should, as far as possible, reflect actual manufacturing and information flows, starting with materials and progressing through components or intermediate products before requirements for final products are defined. Where final-product delegated acts are developed before corresponding upstream requirements are in place, they should not impose information obligations that downstream manufacturers cannot realistically fulfil because the necessary data has not yet been generated

or made available upstream. This is also relevant where the same product is an intermediate product in one value chain and a final product in another. A coherent framework is needed to avoid regulatory gaps, duplication and conflicting requirements and to ensure that final product obligations remain achievable in practice.

4 Ensure early stakeholder involvement and realistic data-collection timelines

Stakeholders should be involved early and throughout the preparatory study in a structured and representative way. Consultations should include manufacturers, component suppliers, recyclers and other relevant actors, and must allow sufficient time to collect robust and actionable data. For the broad range of substances envisaged under the methodology, relevant information is not readily available at article or component level and must first be collected from suppliers across multi-tier supply chains. A consultation period of only a few weeks is therefore not sufficient to generate a representative and reliable evidence base. Stakeholders should therefore be given adequate time to identify data gaps, engage the relevant suppliers and consolidate the information required for a meaningful assessment. In practice, obtaining new substance-related information that is not already available through existing legal or commercial information flows can require significant effort and long collection periods across complex and international multi-tier supply chains and may, in some cases, take years.

Before defining product-specific substance lists, thresholds, reference units, DPP data fields or implementation dates, a robust impact assessment should be initiated. This assessment should evaluate data availability, environmental benefit, administrative and IT costs, enforceability, import compliance and SME impacts. The results should be validated through structured stakeholder consultations. Preparatory studies should prioritise the collection of robust, representative and verifiable data. Unrealistic timelines risk generating incomplete, inconsistent or non-verifiable information, reducing the reliability of subsequent assessments and policy decisions.

5 Demonstrate a concrete circular-economy benefit

Before any legally binding substance-related information or performance requirements are established, a preparatory study should clearly define the specific use for the information, who will use it and how it is expected to deliver a concrete benefit to the circular economy. The collection of substance information as such does not create a clear sustainability benefit and may be disproportionate to the effort involved.

Experience with SCIP demonstrates the importance of this principle. Significant industry resources were devoted to compliance, with SMEs in particular being overwhelmed by these reporting requirements, while the practical use of the information by recyclers has remained limited. Moreover, no clear additional health or environmental benefit has been demonstrated to date. Consequently, the European Commission has proposed repealing the obligation to report SCIP-related data. This experience should not be repeated under the ESPR. The assessment should focus on established and practically relevant waste treatment processes and on how the information can support meaningful and sustainable treatment outcomes. It should, for example, reflect established waste treatment steps such as dismantling, shredding and sorting, as well as the management of mixed or diluted material fractions and other relevant treatment processes. The relevant use cases and information needs should be identified together with waste treatment operators, recyclers and other relevant stakeholders.

Any substance information imposed should be consistently available and provided throughout the supply chain, from upstream suppliers to the final product and, where relevant, through to the waste management operators expected to use the information. This approach would help ensure that information requirements are proportionate, actionable and linked to a demonstrable circular-economy benefit.

6 Limit substance inventories for complex products

For complex products, a complete inventory of all substances used throughout the entire life cycle (in some cases more than 40 years) cannot reasonably be expected to be generated with sufficient completeness and reliability under current supply-chain conditions. If such an inventory is nevertheless considered necessary, it must be recognised that this would require a fundamentally different supply-chain information model. Information beyond existing legal communication duties is often unavailable at article or component level.

The absence of (legally) required upstream information must not be converted into a downstream obligation to generate or reconstruct data. Additional information on intentionally (IAS) or non-intentionally added substances (NIAS) or life-cycle substances beyond established information flows should only be included where the preparatory study identifies a specific hotspot, a reliable data source, and a validated verification method.

Where information gaps remain, the preparatory study should build on existing evidence and assessments under REACH, RoHS and POPs, as well as comparable ESPR preparatory studies for similar product groups, rather than starting the analysis from scratch. The guiding principle should be ‘one substance, one assessment’: previously compiled inventories, existing thresholds, methods, consultation input and conclusions should be reused where relevant. For instance, as part of the substance assessment under RoHS, a comprehensive inventory³ of substances in products covered by the RoHS Directive has been compiled. Generic literature searches or safety data sheets alone are not sufficient to identify substances in products.

7 Differentiate SoC categories and expand reporting step by step (digitise – prove – expand)

The four SoC categories in the ESPR are based on different legal and technical concepts and should not be treated as a single automatic trigger for reporting obligations.

- **SoC(a):** the REACH Candidate List provides an already established basis for substance communication in products. Mandatory information obligations already exist under Article 31 REACH for substances and mixtures and under Article 33 of REACH for articles. SoC(a) already has a coherent and established regulatory information system in the supply chain. The priority should be to improve reliability and usability and to enable a uniform digital exchange of existing SVHC information.

SoC(b): follows the logic of CLP hazard communication for substances and mixtures. The category potentially covers several thousand substances. However, substances and mixtures are transformed or integrated during manufacturing and therefore have a different risk profile when bound within the finished articles. As a result, there is no general risk or legal requirement to communicate all substances with hazard classification contained in articles throughout supply chains in the same way as for substances and mixtures. The absence of article-level communication for all SoC(b) substances should therefore not be interpreted as a general information gap, but as part of the established risk-based architecture of REACH and CLP. The presence of SoC(b) should therefore not automatically trigger article-level reporting. A broad reference to harmonised CLP classifications would create unmanageable information obligations for article manufacturers, especially for complex industrial products consisting of thousands of components sourced through global, multi-tiered supply chains. The lack of article- and component-level SoC(b) information is structural rather than transitional. Additional implementation time alone does not establish the necessary information flows, verification methods or reporting standards. Where data availability cannot be ensured, justified exemptions from the relevant information requirements should be provided under Article 7(6)(b) ESPR.

- **SoC(c):** should remain governed by the POPs Regulation. Additional ESPR information requirements should only be considered where a concrete, non-duplicative need for information on substances reasonably expected to be present in the relevant product or waste stream has been demonstrated for waste treatment or recycling. Existing limits, conditions and exemptions under the POPs Regulation must remain authoritative, and any adjustment should be left to the established regulatory process under that Regulation.
- **SoC(d):** should only become subject to reporting obligations where a causal and material impact on reuse or recycling is demonstrated for the relevant product application or waste stream in an established industrial treatment route. Voluntary customer specifications, restricted-substance lists or analytical detection limits alone are not sufficient to establish a binding SoC(d) requirement. Where a substance still serves an essential technical function, for example for safety, durability or reliability, a binding SoC(d) requirement should only be proposed where a robust cost-benefit and life-cycle trade-off assessment shows that the circularity benefit outweighs the product-function benefit and that a technically and economically feasible alternative exists. Overall, the definition of SoC(d) and the JRC methodology remain insufficiently clear and lack objective criteria for determining when a substance has a material impact on reuse or recycling.

³ Study to support the review of the list of restricted substances and to assess a new exemption request under RoHS 2 (Pack 15, [Link](#)), PART I: Identification of substances¹⁵ used and/or present in EEE, which may have negative impacts on human health, the environment or resource efficiency during use and/or during WEEE management according to RoHS Article 6(1) and [RoHS Final Prioritised Substances List 20200516.xlsx](#)

Implementation should follow a gradual approach (digitise – prove – expand), starting with SoC(a) and established REACH Article 33 information flows. Existing information should first be made reliable and usable for ESPR purposes before reporting obligations are extended to additional substance categories. Second, prove the information need, intended users, practical use and benefit, data availability, standards, verifiability and equal enforceability before extending requirements. Where data availability cannot be ensured, justified exemptions should be provided under Article 7(6)(b) ESPR.

Overall, any product-specific information requirement should be limited to a closed and exhaustive substance list, harmonised across product groups, and supported by a demonstrated circular-economy benefit, a technical standard, a full impact assessment, reliable upstream data, realistic transition periods and predictable review cycles. Substance lists and reporting requirements should only be updated through fixed, predictable review cycles at defined intervals and not through continuous or ad-hoc changes. Changes to CLP classifications should not automatically trigger new product-specific ESPR duties. Any extension must first be reviewed for relevance, feasibility, thresholds, exemptions, verification and implementation time.

8 Ensure supply-chain feasibility and fair enforcement

New downstream duties must be feasible and enforceable in practice across the relevant supply chain, including imported components and products. SoC requirements for complex products can only work where the corresponding information can realistically be obtained upstream and passed on consistently. As already reflected in the REACH Article 33 model, downstream information obligations depend on mandatory upstream information provision. Horizontal harmonisation of substance lists across product groups is therefore essential to enable effective sharing of information at component level. Where the necessary information is not already subject to mandatory communication under existing legislation, the delegated act must establish the corresponding upstream information flow under Article 38 ESPR. Where such an information flow cannot be ensured, the resulting data gaps should be addressed through justified exemptions under Article 7(6)(b) ESPR.

Before introducing a new requirement, the preparatory study should assess whether the necessary information is subject to corresponding upstream information duties and can realistically be obtained from suppliers throughout the relevant supply chain. It should also demonstrate that the requirement can be implemented and enforced in practice for both EU-manufactured and imported products, without placing a higher practical burden on EU manufacturers than on importers of finished products. Particular attention should be paid to SMEs and companies with limited leverage over non-EU suppliers. Full analytical screening must not be treated as the default means of compliance.

Economic operators should be responsible for information within their control and for reasonable due diligence. The regulatory framework should clearly define which economic operator is responsible for making available and transmitting each category of substance information. They should not be held responsible for reconstructing or generating unavailable formulation data, such as the SoC(b) or (d) information that upstream actors are currently not legally required to provide for articles. New duties should also not create retrospective data-generation obligations for legacy products and spare parts where information cannot reasonably be reconstructed.

A new information requirement should therefore only be introduced where a workable information flow can be established throughout the relevant supply chain, with clear responsibilities at each level and a realistic basis for compliance and enforcement.

9 Define thresholds and reporting levels clearly

A unified denominator for the reporting threshold is required across all product categories. The relevant reference level and unit of assessment should be clearly defined before data collection begins and should remain consistent across the supply chain. This is essential to ensure that the same substance information can be communicated and reused without different interpretations depending on the product group or level of the supply chain. The established threshold communicated throughout complex article supply chains is the Article 33(1) REACH threshold of 0.1% by weight per article. This threshold should remain the starting point for article-related communication. Thresholds should be based on market-representative data and actual concentrations, not on isolated edge cases.

10 Apply strict conditions to performance requirements and substitution

A substance-related performance requirement (restriction) should only be considered where it is supported by a genuinely suitable and available alternative for the specific application. Any substance restrictions purely due to health or environmental risks should not be introduced in ESPR, but exclusively via REACH, RoHS or the POPs Regulation. The existence of a technically conceivable substitute is not sufficient. The alternative must be technically qualified, industrially scalable and commercially available in sufficient quantities, while meeting equivalent safety, durability, reliability, energy-efficiency and other relevant product requirements over the full product lifetime.

The assessment should consider the overall product implications of the substitution, including necessary re-design, tooling, testing, certification, supplier qualification, warranty and liability implications, supply capacity and realistic conversion timelines. It should also consider the relevant use and end-of-life conditions to ensure that an apparent improvement in one sustainability aspect does not create adverse effects elsewhere in the product life cycle.

Existing assessments of alternatives and risk-management decisions under REACH, RoHS or the POPs Regulation should be reused wherever relevant and should not be duplicated unless a distinct ESPR-specific circularity question remains to be addressed. The ESPR assessment should focus on aspects that are not already adequately covered by the existing regulatory framework.

Where no suitable and sufficiently available alternative can be demonstrated, or where the required transition would not be realistically achievable without disproportionate impacts on product performance, supply or product availability, a substance-related performance requirement should not be proposed.

11 Ensure workable recycled-material-specific limits for legacy substances in recycled materials

Legacy substances present in recycled material can create a genuine conflict between circularity objectives and substance-related requirements. Where secondary raw materials are needed to meet recycled-content objectives, the applicable framework should provide workable conditions for their use, for example through recycled-material-specific limits, appropriate exemptions or time-limited derogations, where justified.

ESPR preparatory studies should identify these conflicts at an early stage and refer them to the competent regulatory process. Requirements under different pieces of legislation should be designed to work together rather than create contradictory obligations for manufacturers using recycled materials. Until the conflict has been resolved in the competent legal framework, a delegated act should not simultaneously require recycled content and impose substance limits that make the use of compliant secondary raw materials technically or economically impossible.

Conclusion

ZVEI supports substance information where it delivers a clear and measurable sustainability benefit and takes into account existing disposal and recycling practices for the common waste streams. For complex electrical and electronic products, the JRC methodology can only serve as a starting point for a narrower, phased, and evidence-based approach.

Existing industry best practices on substance information, based on existing substance communication under REACH Article 33(1) or international standards, should be supported. These systems are sufficiently flexible to support ESPR substance-information requirements.

To ensure that substance reporting remains practical and manageable, SoC lists should be short, closed, stable, and harmonised across product groups and delegated acts.

DIGITISE – PROVE – EXPAND. Adhere to a stepwise approach by first digitising the existing information core; prove the use case, benefit and supply-chain feasibility of additional data; expand only selectively. Keep ESPR coherent and proportionate, and do not impose major new burdens without a clear circular-economy return.

In ZVEI's view, Article 7(6) ESPR provides a legally defensible basis for a phased and product-group-specific approach.

The decisive test for any delegated act should be whether it is built on representative market data, a clear circular-economy benefit, existing legal and information systems, corresponding upstream information duties, and requirements that are harmonised across product groups, workable for global supply chains and equally enforceable for EU products and imports. Only under these conditions can ESPR add value instead of duplicating existing rules and data flows or creating a parallel chemicals regulatory system.

ZVEI remains willing to contribute its technical and supply-chain expertise to further discussions with the European Commission, the JRC and other stakeholders in order to develop practical, proportionate and legally coherent substance-information requirements under the ESPR.

ZVEI: Electro and Digital Industry Association

The ZVEI represents the common interests of the electro and digital industry and associated service companies in Germany and internationally. The association has more than 1,100 member companies and 160 employees in the ZVEI Group.

At the end of 2025, the industry employed 873,000 people in Germany. This makes it the second largest industrial sector in our country. The sector's 2025 turnover amounted to 225 billion euros.

The electro and digital industry is one of the most innovative economic sectors in Germany. Every year, the industry spends 14 billion euros on R&D and more than nine billion euros on investments.

Contact

Kirsten Metz • Senior Manager Chemicals and Environmental Policy • Sustainability & Environment Division
Phone: +49 69 6302-212 • Mobile: +49 162 2664-952 • E-mail: kirsten.metz@zvei.org

ZVEI e. V. • Electro and Digital Industry Association • Amelia-Mary-Earhart-Str. 12 • 60549 Frankfurt a.M.
Germany • Lobby register no.: R002101 • EU Transparency Register ID: 94770746469-09 • www.zvei.org

Date: 11.09.2026

ⁱⁱ SoC a)- d) are defined in Art. 2(27) of Regulation (EU) 2024/1781 as follows:

- SoC a) meets the criteria laid down in Article 57 of Regulation (EC) No 1907/2006 and is identified in accordance with Article 59(1) of that Regulation;
- SoC b) is classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 in one of the following hazard classes or hazard categories:
 - i. carcinogenicity categories 1 and 2;
 - ii. germ cell mutagenicity categories 1 and 2;
 - iii. reproductive toxicity categories 1 and 2;
 - iv. endocrine disruption for human health categories 1 and 2;
 - v. endocrine disruption for the environment categories 1 and 2;
 - vi. persistent, mobile and toxic or very persistent, very mobile properties;
 - vii. persistent, bioaccumulative and toxic or very persistent, very bioaccumulative properties;
 - viii. respiratory sensitisation category 1;
 - ix. skin sensitisation category 1;
 - x. hazardous to the aquatic environment — categories chronic 1 to 4;
 - xi. hazardous to the ozone layer;
 - xii. specific target organ toxicity — repeated exposure categories 1 and 2;
 - xiii. specific target organ toxicity — single exposure categories 1 and 2;
- SoC c) is regulated under Regulation (EU) 2019/1021
- SoC d) negatively affects the reuse and recycling of materials in the product in which it is present