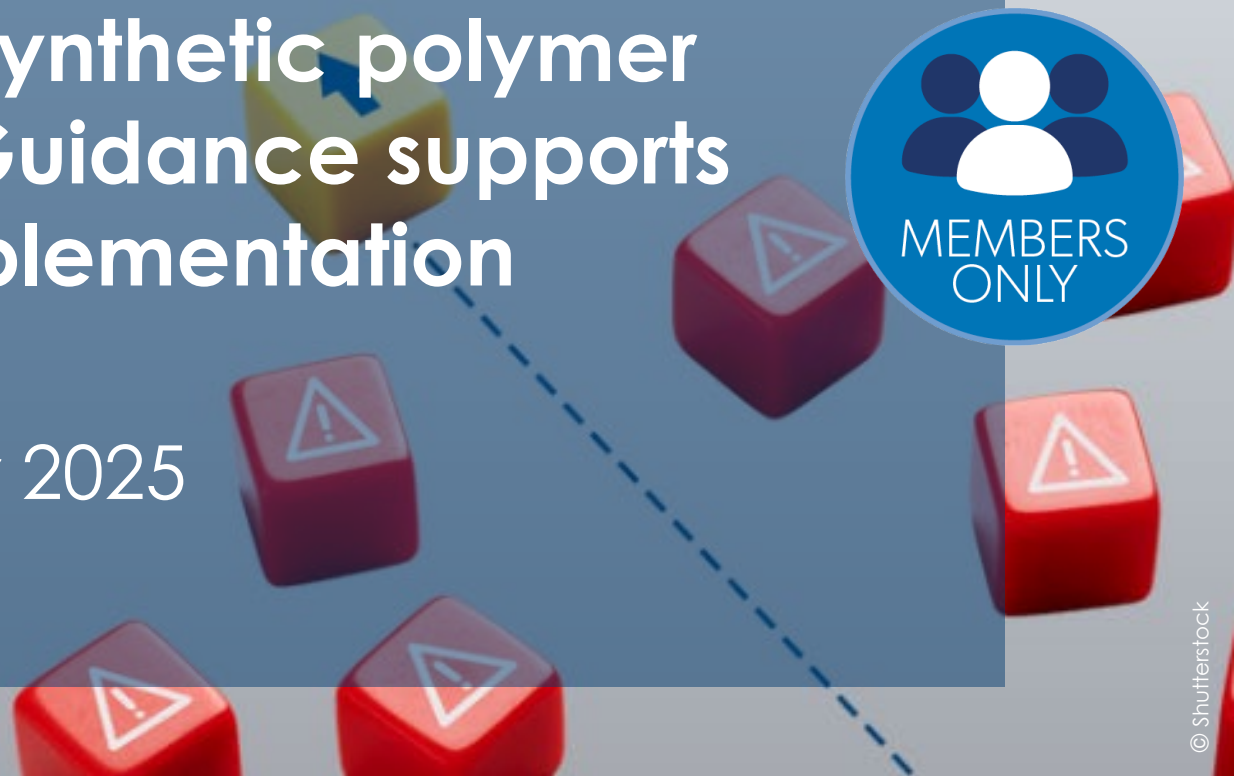
The European voice of the **adhesive and sealant industry**

REACH Restriction on synthetic polymer microparticles: FEICA Guidance supports members with implementation

02 October 2025



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Agenda

10:00	**Introduction**
	Jana Cohrs – Rahmoun, Director Public & Regulatory Affairs, FEICA
10:05	**Updated FEICA guide on SPM: What's new?**
	Martin Gloeckner, Chair of the FEICA SPM Restriction TF, IVK
10:35	**The FEICA calculation tool - methodology**
	Thorsten Wind, Vice-Chair of the FEICA SPM Restriction TF, Henkel
10:55	**Practical use of the FEICA calculation tool**
	Torsten Funk, FEICA consultant
11:15	**Q&A**

Jana Cohrs – Rahmoun

Director Public & Regulatory Affairs, FEICA

Introduction

REACH Restriction on Synthetic Polymer Microparticles (SPM)

Adopted under Commission Regulation (EU) 2023/2055 (entry 78 of Annex XVII)

Applies to synthetic polymer microparticles (SPM): solid, water-insoluble, non-biodegradable, <5 mm (or <15 mm for fibres)

Products with SPM ≥ 0.01% w/w cannot be placed on the market unless a derogation applies

REACH Restriction on Synthetic Polymer Microparticles (SPM)

Obligations for downstream users and suppliers include:

- Labelling & information to customers
- Instructions for use & disposal (IFUD)
- Annual reporting to ECHA (from 2027 onwards)

Transition deadlines: first obligations apply from 17 October 2025

Today’s topics

- Updated FEICA Guidance on SPM – main changes & obligations
- FEICA Calculation Tool – Methodology – technical approach
- Practical Use of the Tool – examples for reporting
- Q&A – discussion & feedback

Martin Gloeckner
Chair of the FEICA Microparticles Restriction TF, IVK

Updated FEICA guide on SPM: What's new?

Topics

1. Main obligations of formulators of adhesives and sealants
    1. Identification of raw materials and products that fall under the SPM restriction
    2. Labelling and information obligations towards customers
    3. Annual reporting obligations to ECHA
2. Transition periods and deadlines
3. Support from FEICA

Identification of raw materials and products that fall under the SPM restriction

How to identify SPM?

- Complex definition of SPM
  - Regarding SPM criteria:
    DU should rely on the information from the supplier
  - In case of doubt, ask your supplier as soon as possible
  - If possible, DU should not assess for themselves whether his raw material meets the SPM definition
- Concentration limit for SPM in mixtures: 0.01 %
- Important note to determine the correct quantity of SPM
  - SPM does not refer to the entire particle, but only to the polymer content within the particle that meets the SPM criteria
  - Also, regarding the polymer content, the DU should rely on the information provided by his supplier

Derogations for certain (end-) uses

- Use at industrial sites, e.g. formulating adhesives and sealants *(Paragraph 4, a))*
- Physical properties are permanently modified during intended end-use in such a way that the polymer is no longer within the scope *(Paragraph 5, b))*
- Permanently incorporated into a solid matrix during intended end-use *(Paragraph 5, c))*
- *… (Paragraphs 5 a), and 4 b) to f))*

The products can still be placed on the market for the intended use.
However, the labelling, information and annual reporting obligations apply.

Labelling and information obligations towards customers

Requirements depend on the type of customer

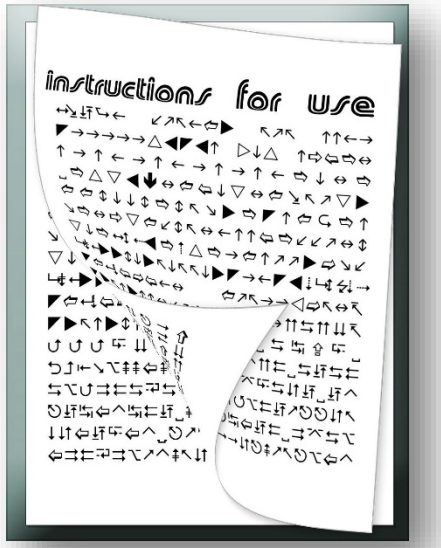
- For SPM and SPM-containing mixtures for the **use at industrial sites**
  - Instructions for use and disposal (IFUD)
  - Predefined text phrase, indicating that the SPM restriction applies
  - Information on the quantity of SPM in the SPM-product (substance or mixture)
  - Generic information on the identity of the SPM-polymer(s)

  This information enables customers to fulfil their own reporting obligations. Can be communicated with SDS

- For SPM and SPM-mixtures for **professional users or the general public**
  - Instructions for use and disposal (IFUD),

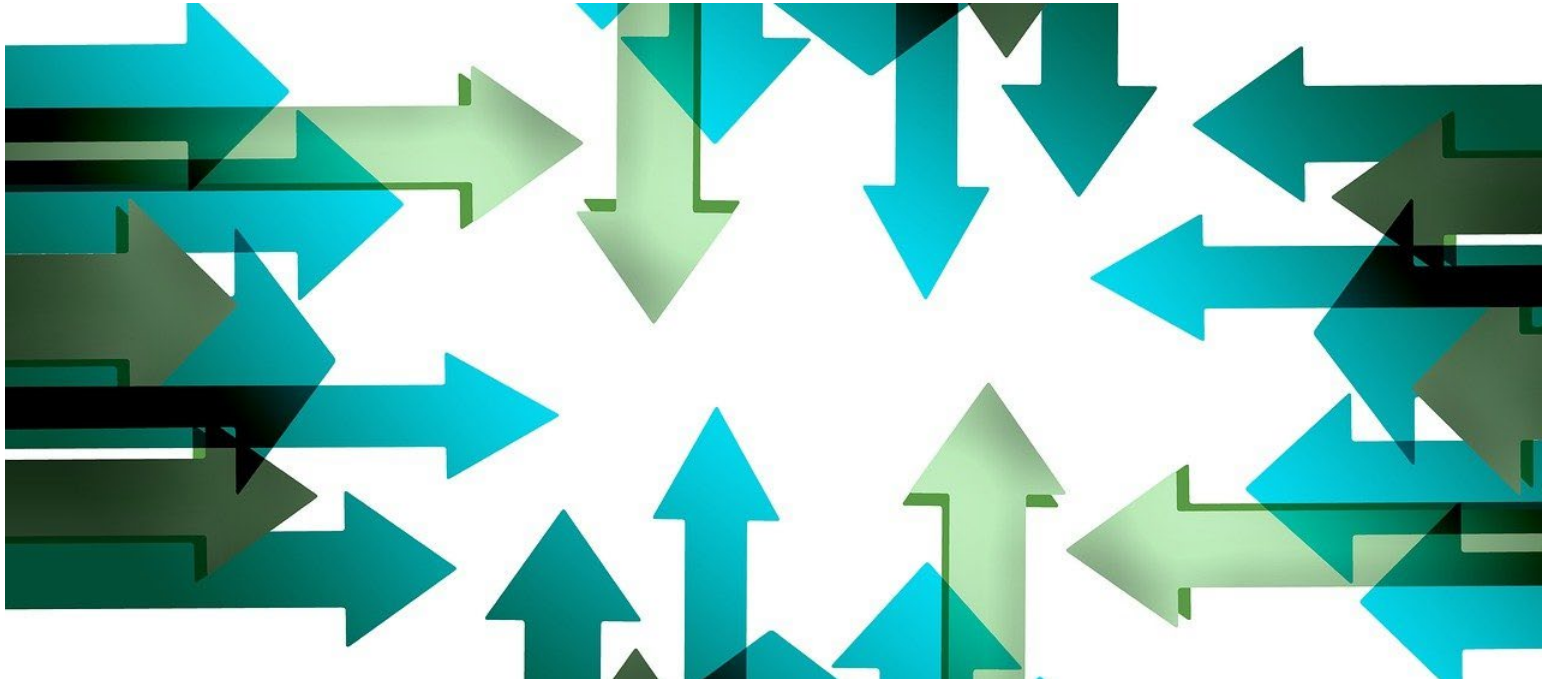
  On the label, packaging or package leaflet

Form of the instructions for use and disposal (IFUD)



- IFUD in text form
  - Clearly visible, legible and indelible text
  - In the languages of Member States where the SPM product is placed on the market
- IFUD in form of pictograms
  - Preferably, pictograms should be used to avoid translations. Especially for professional users and the general public (DIY) where the IFUD must be on the label, on the packaging or in a package leaflet

- See Appendix 2 of the updated FEICA Guidance on the SPM restriction



Annual reporting obligations to ECHA

Which actors have to report to ECHA once a year?

- Manufacturers of SPM
- Industrial downstream users (e.g. formulators)
- Suppliers of SPM-containing mixtures placed on the market for the first time for professional users and the general public

***Professional users*, the *general public* and *distributers* have no reporting obligations.**

Remarks

- Reporting shall be done by each legal entity that is subject to the reporting requirements
- Supplier can be a manufacturer, importer or industrial downstream user

What information must be reported to ECHA?

Manufacturers of SPM and Industrial downstream users (e.g. formulators), using **SPM at industrial sites** must provide the following information:

- A description of their own uses of SPM in the previous calendar year
- For each of their own SPM uses:
  - Generic information on the identity of the polymers used
  - An estimate of the quantity of SPM released to the environment
  - A reference to the derogation laid down in paragraph 4, point (a)

Remark

- The granularity for the estimation of environmental emissions is per use. One emission estimate per use.

What information must be reported to ECHA?

Suppliers of SPM-containing mixtures **placed on the market for the first time to professional users and the general public**:

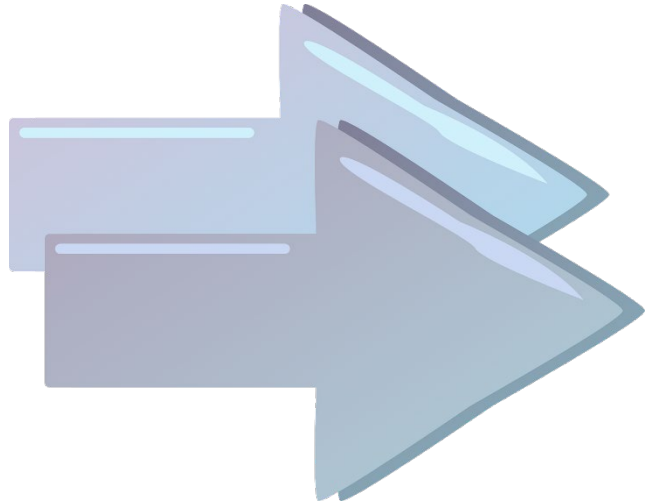
- A description of the end uses for which the SPM were placed on the market in the previous calendar year. '*intended end uses*'
- For each of the *intended end uses*:
  - Generic information on the identity of the polymers used
  - An estimate of the quantity of SPM released to the environment
  - A reference to the applicable derogation or derogations laid down in para. 4, point (b), (d) or (e), or 5, point (a), (b) or (c).)

Remark

- The granularity for the estimation of environmental emissions is per (end) use.
  One emission estimate per (end) use

What information must be reported to ECHA?

Often formulators of adhesives and sealants are



- Industrial DU

and **also**

- Suppliers of SPM-containing mixtures placed on the market for the first time to professional users and the general public

In these cases, they must report to ECHA on

- Their own uses of SPM at their industrial sites

and **additionally**, on

- The intended end-uses of their professional customers and the general public (DIY)

What are the uses that are distinguished for the reporting?

Available uses to be selected from a picklist in IUCLID:

- *Manufacture or use of pellets, flakes and powders for plastic manufacturing at industrial sites*
- ***Other manufacture or use at industrial sites***
- *Consumer and/or professional use in medicinal and veterinary medicinal products*
- *Consumer and/or professional use in food additives*
- *Consumer and/or professional use in in vitro diagnostic devices*
- ***Other consumer and/or professional use***

Remark

- The granularity for the estimation of environmental emissions is per use.
  One emission estimate per use

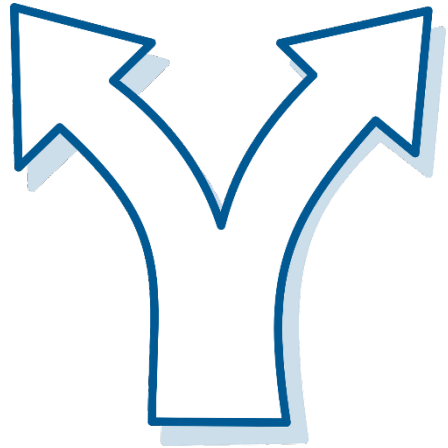
Providing generic information on the identity of the polymers

- *3806 Rosin and resin acids, and derivatives thereof; rosin spirit and rosin oils; run gums*
- *3901 Polymers of ethylene, in primary forms*
- *3902 Polymers of propylene or of other olefins, in primary forms*
- *3903 Polymers of styrene, in primary forms*
- *3904 Polymers of vinyl chloride or of other halogenated olefins, in primary forms*
- *3905 Polymers of vinyl acetate or of other vinyl esters, in primary forms; other vinyl polymers n primary forms*
- *3906 Acrylic polymers in primary forms*
- *3907 Polyacetals, other polyethers and epoxide resins, in primary form polycarbonates, alkyd resins, polyallyl esters and other polyesters, in primary forms*
- *3908 Polyamides in primary forms*
- *3909 Amino-resins, phenolic resins and polyurethanes, in primary forms*
- *3910 Silicones in primary forms*
- *3911 Petroleum resins, coumarone-indene resins, polyterpenes, polysulphides, polysulphones and other products specified in Note 3 to this Chapter, not elsewhere specified or included, in primary forms*
- *3912 Cellulose and its chemical derivatives, not elsewhere specified or included, in primary forms*
- *3913 Natural polymers (for example, alginic acid) and modified natural polymers (for example, hardened proteins, chemical derivatives of natural rubber), not elsewhere specified or included, in primary forms*
- *4001 Natural rubber, balata, gutta-percha, guayule, chicle and similar natural gums, in primary forms or in plates, sheets or strip*
- *4002 Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading 4001 with any product of this heading, in primary forms or in plates, sheets or strip*
- *9999 Other (Any polymer not covered by the other headings)*

Estimation of the release of SPM into the environment

ECHA provides two options for reporting the estimated quantity of SPM:

- *Option A 'Quantity of particles containing SPM'*
  - Goes beyond legal obligations
  - Risk of misinterpretation and overinterpretation
- *Option B "Quantity of SPM"*
  - Complies with legal requirements



To avoid unnecessary misinterpretation and overinterpretation, Option B is recommended.

Remark

- There is no lower threshold for reporting the estimated quantity of released SPM.
  Even "zero emissions" must be reported

Estimation of the release of SPM into the environment

No prescribed method for estimating environmental exposure

- *ECHA makes non-binding references to*
  - OECD Emission Scenario Documents
  - Environmental Release Categories (ERCs)
  - Sector-specific Environmental Release Categories (SPERCs)
- IVK/DBC/FEICA group has adapted relevant FEICA-SPERCs to SPM
  - *E-Calc_SPM* method (available as an Excel tool)
  - Broad applicability, in line with the broad definition of the different uses for SPM reporting
  - Conservative method with a tendency to overestimate releases
  - Can be used when neither specific data or more specific method is available

Transition periods and deadlines

The deadlines and a serious problem

▪ Suppliers of SPM must provide IFUD + additional information (generic polymer name, SPM content) to industrial DU	**17 October 2025**
▪ Suppliers of SPM-containing mixtures must provide IFUD + additional information (generic polymer name, SPM content) to industrial DU	**17 October 2025**
▪ Suppliers of SPM / SPM-containing mixtures must provide IFUD to professional users and the general public	**17 October 2025**
▪ Annual reporting obligations to ECHA, for the first time	31 May 2027 for calendar year 2026
▪ Annual reporting obligations to ECHA	31 May of each year

The same deadline for successive actors in a supply chain?
And everyone should fulfil their legal obligations on time?
That cannot work!

Support from FEICA

FEICA supports its members implementing the restriction

- **FEICA guidance has been updated** and is available for members
- **FEICA SPM TF has developed the E-Calc_SPM-Tool** which can be used to estimate the annual release of SPM into the environment
- **EU COM:** Explanatory Guide 'REACH restriction of synthetic polymer microparticles'
- **ECHA**: *Implementation of the reporting requirements of the REACH restriction on microplastics*
- Expected shortly, **ECHA**: '*Guidelines for the reporting requirements set by the REACH restriction of synthetic polymer microparticles (microplastics)*'

Thorsten Wind

Vice-Chair of the FEICA SPM Restriction TF,
Henkel

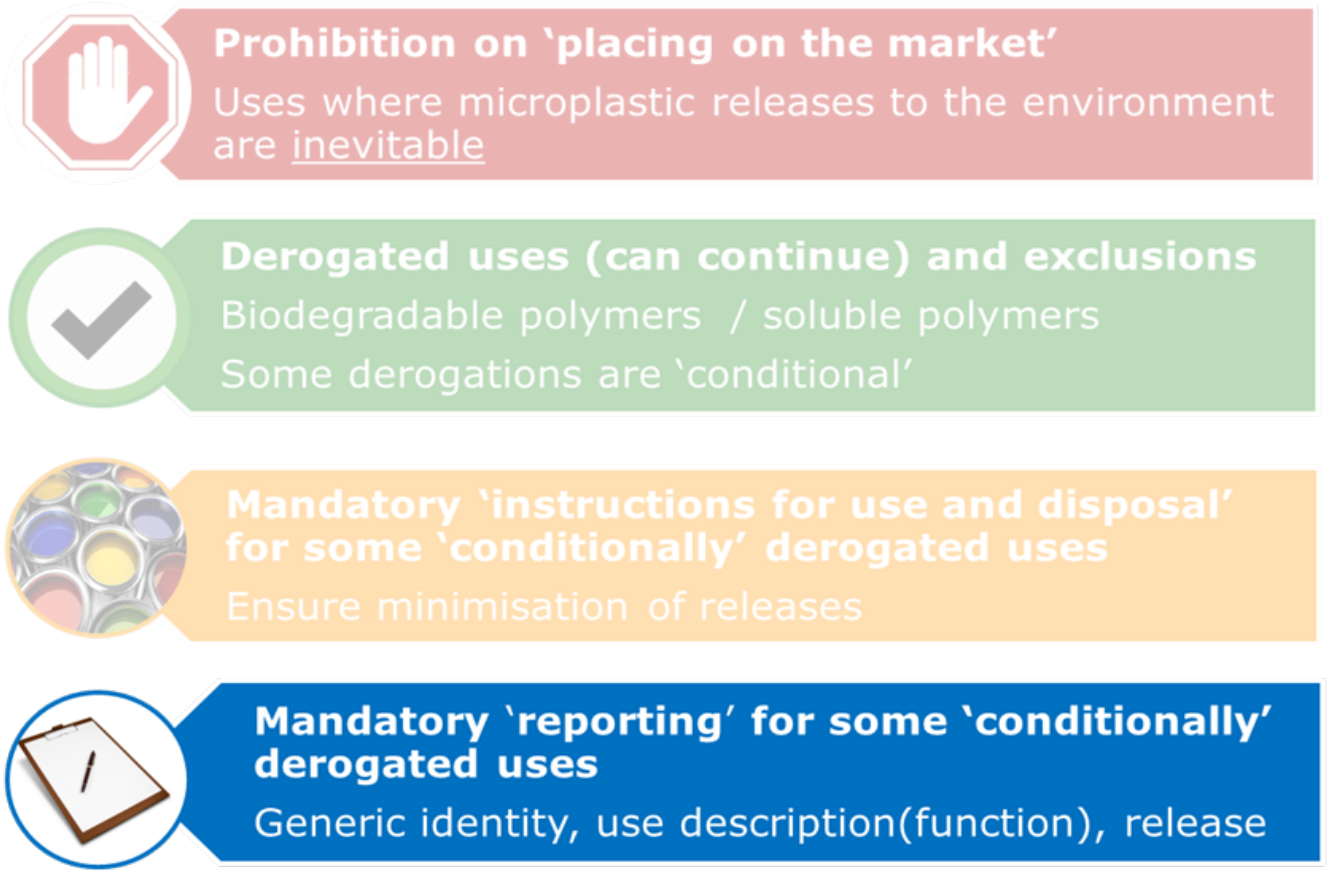
The Generic SPM-Tonnage Estimation Methodology – The FEICA Case

The Restriction in a Nutshell

COMMISSION REGULATION (EU) 2023/2055 entry 78 of Annex XVII (enforced Oct 2023)

Scope

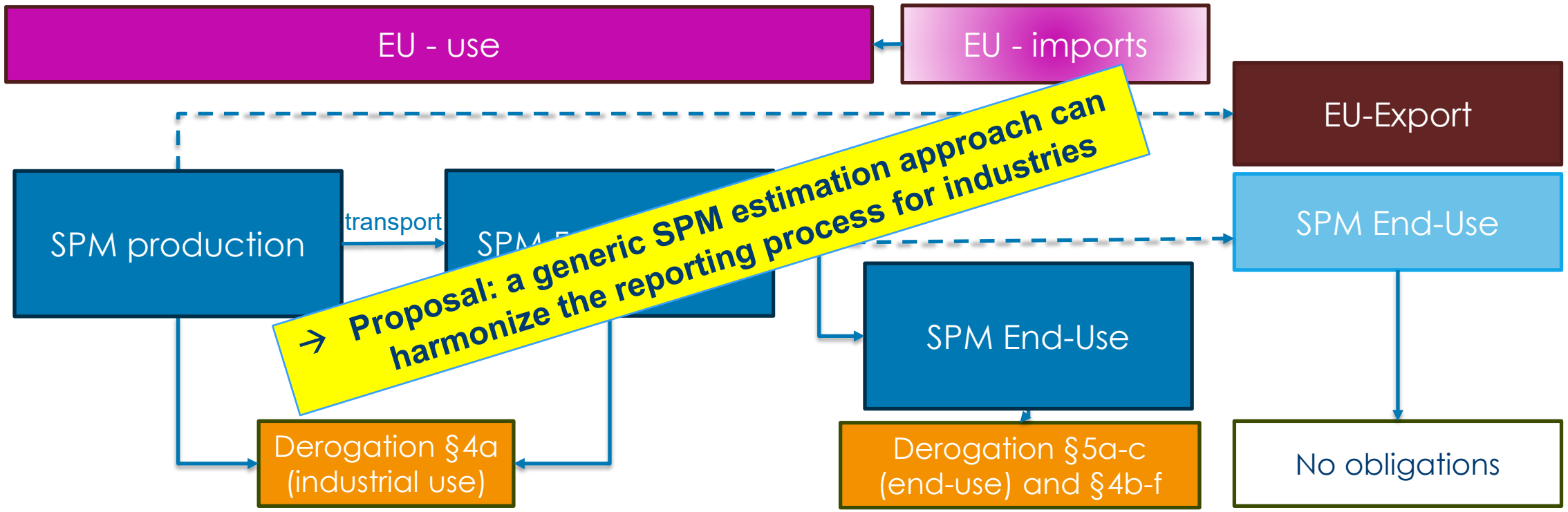
Synthetic polymer microparticles (SPM), solid, water insoluble, not biodegradable, <5mm (<15mm for fibres) shall not be placed on the market as **substances on their own** or, where the synthetic polymer microparticles are present …
… in mixtures in a concentration **≥ 0,01 % by weight**



adopted from ECHA

Reporting Obligations

(annually by May 31st for previous year, starting in 2027 for 2026)



- **<u>Reporting per Legal Entity and Use</u>**
- ….cf. presentation of Martin Glöckner: „Reach Restriction on Synthetic Polymeric Microparticles“
- **Difficult: an estimate of the quantity of SPM released into the environment of the European Economic Area (EEA) per legal entity in the previous calendar year**
- Professional and private end user are exempted from reporting obligations

Scope of the proposal

1. Provide a procedure to allow conservative estimations of environmental SPM releases for reporting purposes

2. Use of existing elements

    I. SPERCs* - established and accepted under REACH (Sector Use Maps)
    Cited by the ECHA 'SPM guidance'
    II. WWTP connectivity, types, sludge handling in EU countries (EuroStat)
    III. SPM removal efficiency in WWTP (ECHA Annex XV Restriction Proposal Report [2019])

3. Achieve broad applicability: several industries (open for expansion if additional SPERCs become available), different end uses, all EU countries

4. Procedure easy to apply

* Specific Environmental Release Categories
(e.g. Saettler D, et al 2012. Integr. Environ Assess Manag 8:580–585
Tolls J., et al 2015. Integr. Environ Assess Manag vol 12:185-194)

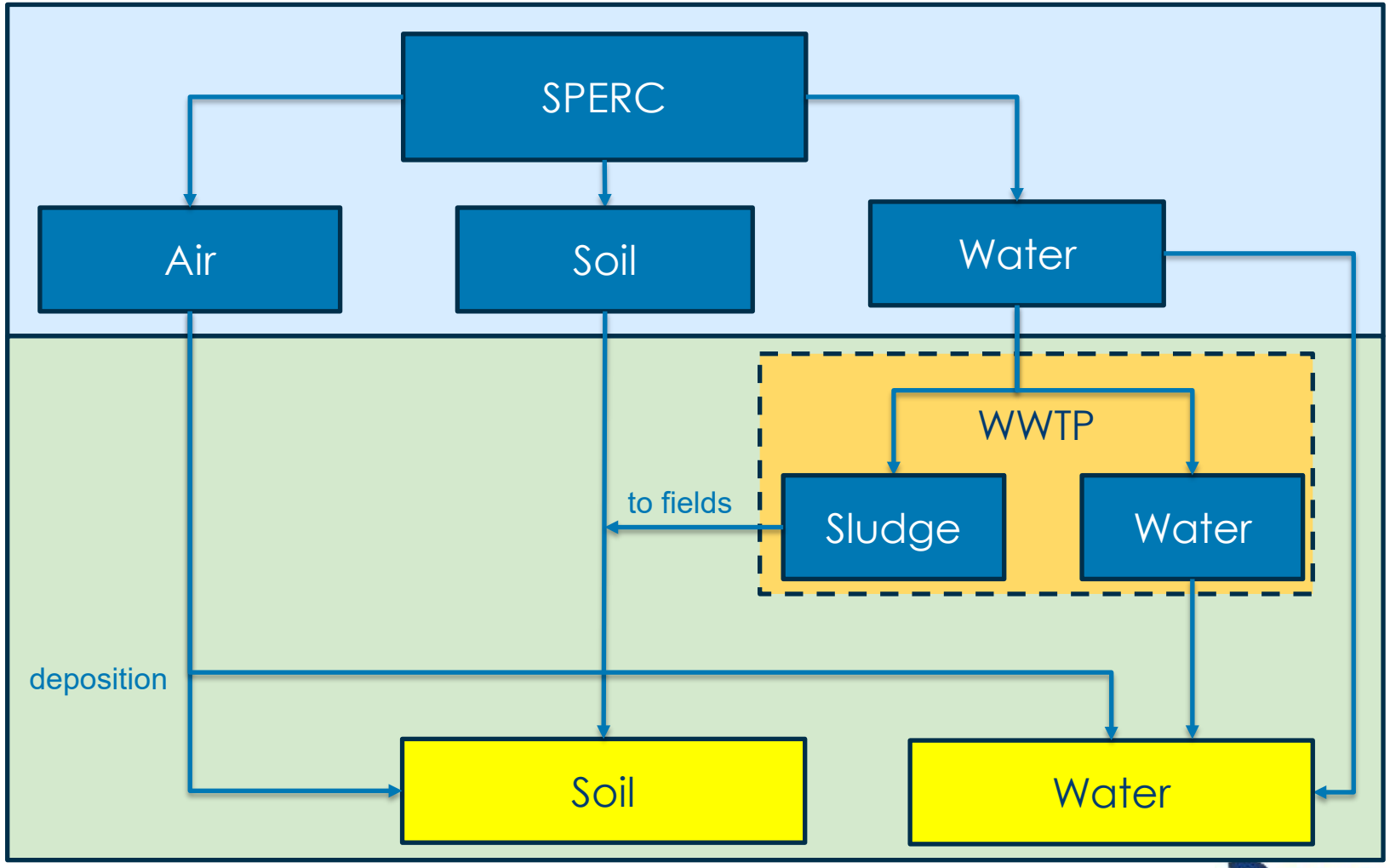
What SPERCs are

- SPERCs are environmental exposure scenarios that reflect specific use conditions (e.g., operating conditions and risk management measures) under which raw materials are used
- SPERCs have been developed by many industries and for a wide range of applications in all relevant life cycle phases of material uses
- The scope of SPERCs is very broad. They serve as conservative exposure models for environmental risk assessments of substances (REACH)
- The documentation and development of SPERCs is harmonised (SPERC fact sheets and background documentation)
- SPERCs are published on the ECHA webpage

Environmental emissions via SPERCs

- SPERCs define **release factors** to air, soil and water

- SPERC release factors enable subsequent **emission modelling**



WWTP= Wastewater Treatment Plant

Example SPERCs with release factors

SPERCs are specific for the use of a substance and/or in products, examples being:

SPERC	Code	RF_{air}	RF_{soil}	RF_{water}
Formulation of **Water-borne** Adhesives / Sealants and Construction Chemical Products – **non-volatile** Substances	FEICA / EFCC SPERC 2.2b.v3	0.0097%	0.00%	0.505%
Formulation of **Solvent-borne and Solventless** Adhesives / Sealants and Construction Chemical Products - **non-volatile Substances**	FEICA / EFCC SPERC 2.1a.v3	0.08%	0.00%	0.02%
Formulation of **non-liquid creams** (small scale); (<1,000 t cosmetic products/year)	Cosmetics Europe SPERC 2.1.j.v3	0.00%	0.00%	4.0%
Coating-application; Industrial; **Spraying**; Indoor use; **Non-Volatile**	CEPE SPERC 5.1a.v2	1.50%	0.00%	0.0%
Widespread use of **non-volatile** substances in construction chemical products – indoor	EFCC SPERC 8c.1a.v2	0.00%	0.00%	1.5%

→ **The use of SPERC requires knowledge on product type and application (use).**

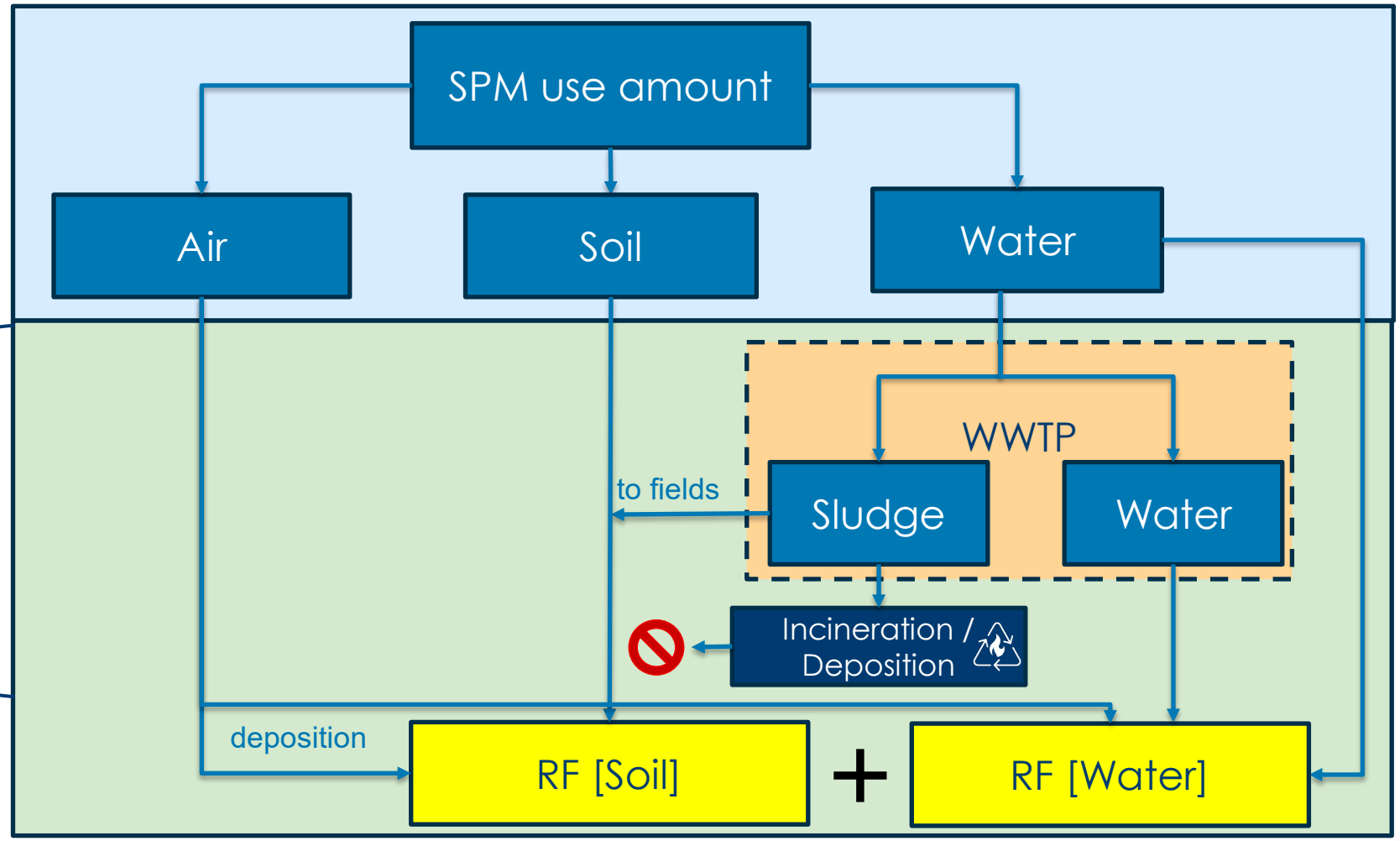
Environmental SPM emission modelling

'E_Calc_SPM Concept'

RF [%] SPERC
(release factors)

WWTP connectivity
-types, sludge handling
in EU countries
(EuroStat)

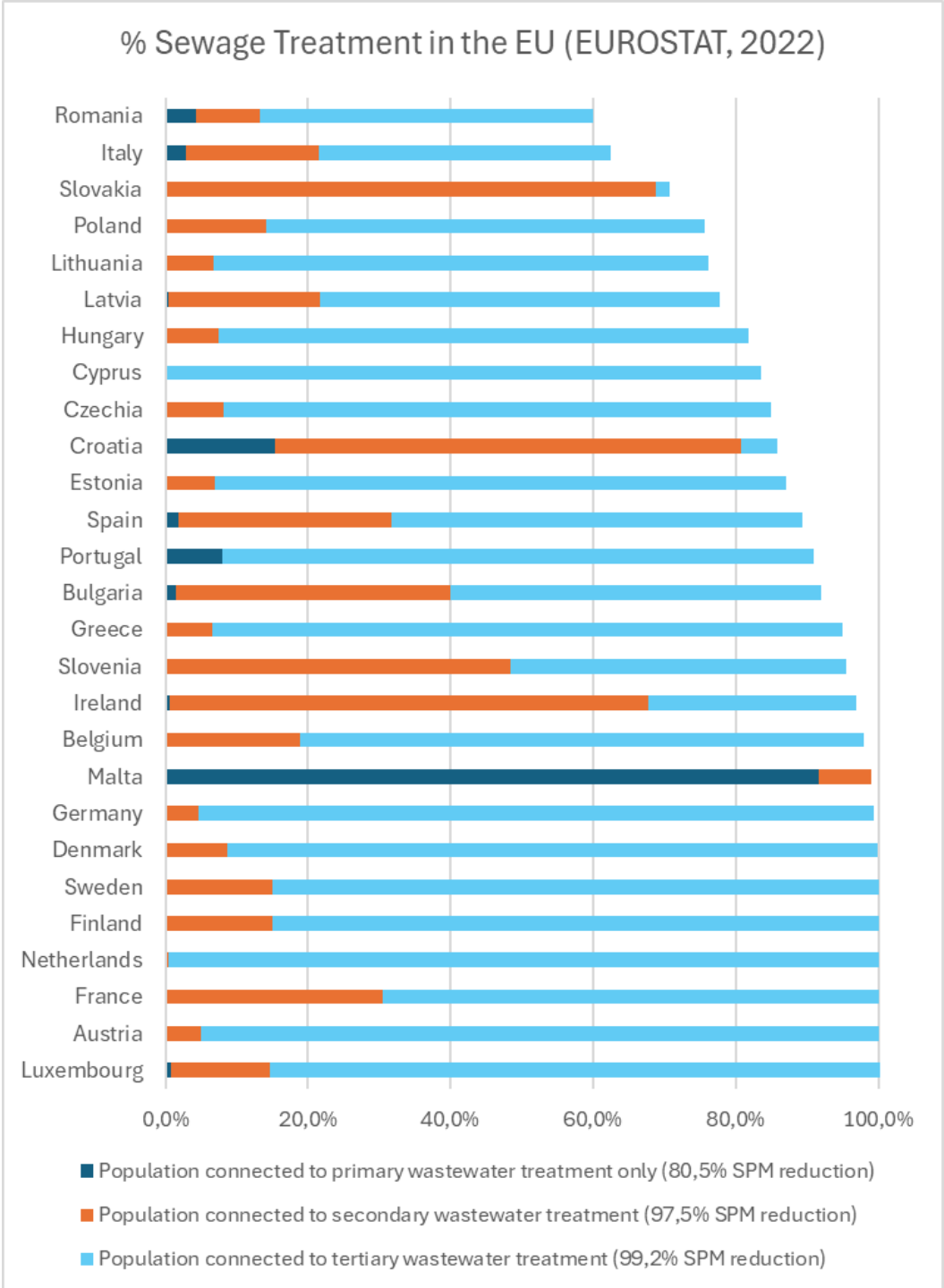
RF [%] SPM =



Sewage treatment in the EU

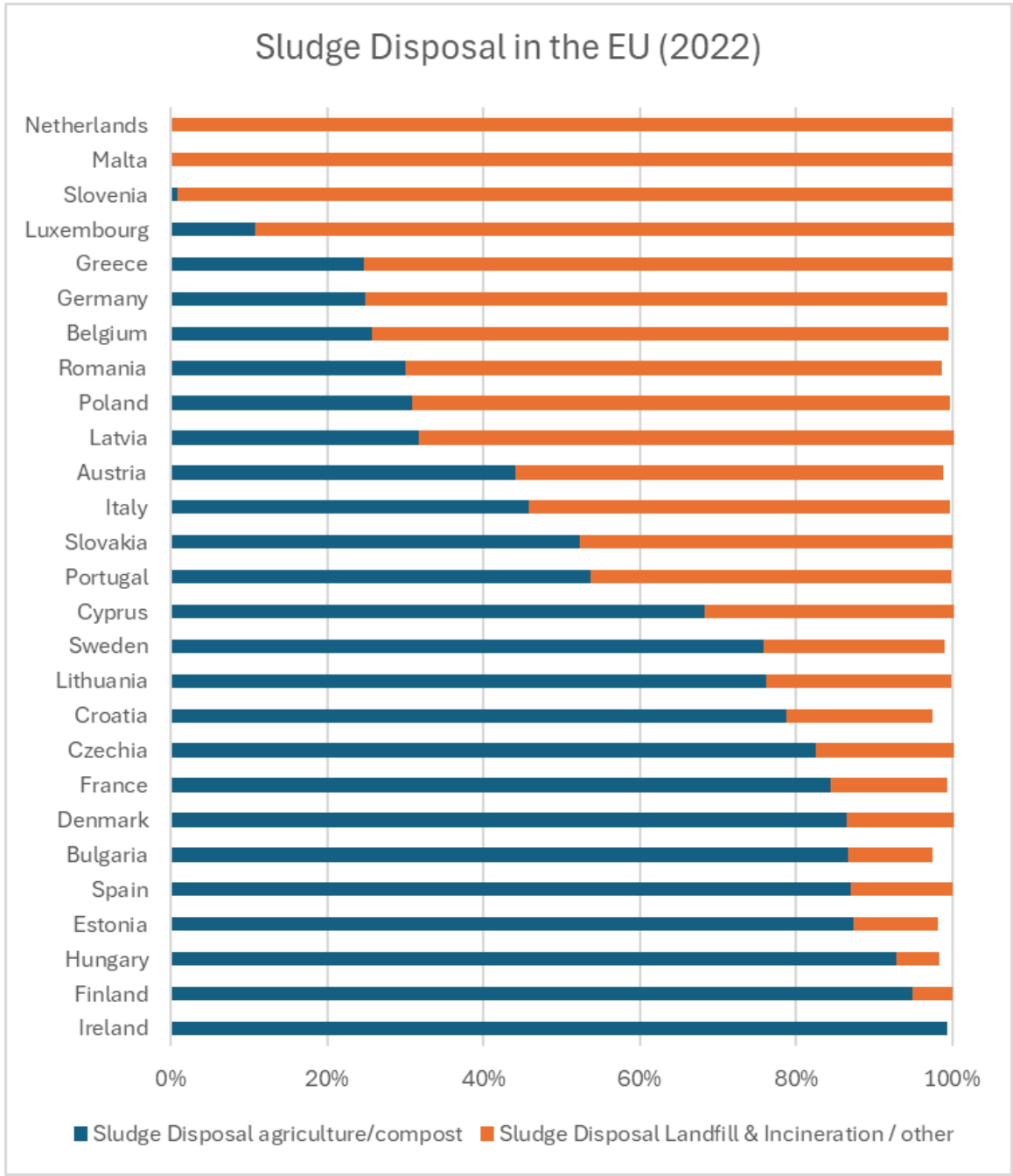
Differentiation of STP technologies and connectivity

1. SPMs are not biodegradable
2. In sewage treatment SPMs are eliminated via sludge (cf. ECHA Report)
3. Efficiency of SPM elimination to sludge depends on STP technology (cf. ECHA Report)
   - primary wastewater treatment: 80.5%
   - secondary wastewater treatment: 97.5%
   - tertiary wastewater treatment: 99.2%
4. EU member states differ significantly in terms of the degree of STP technology and connectivity



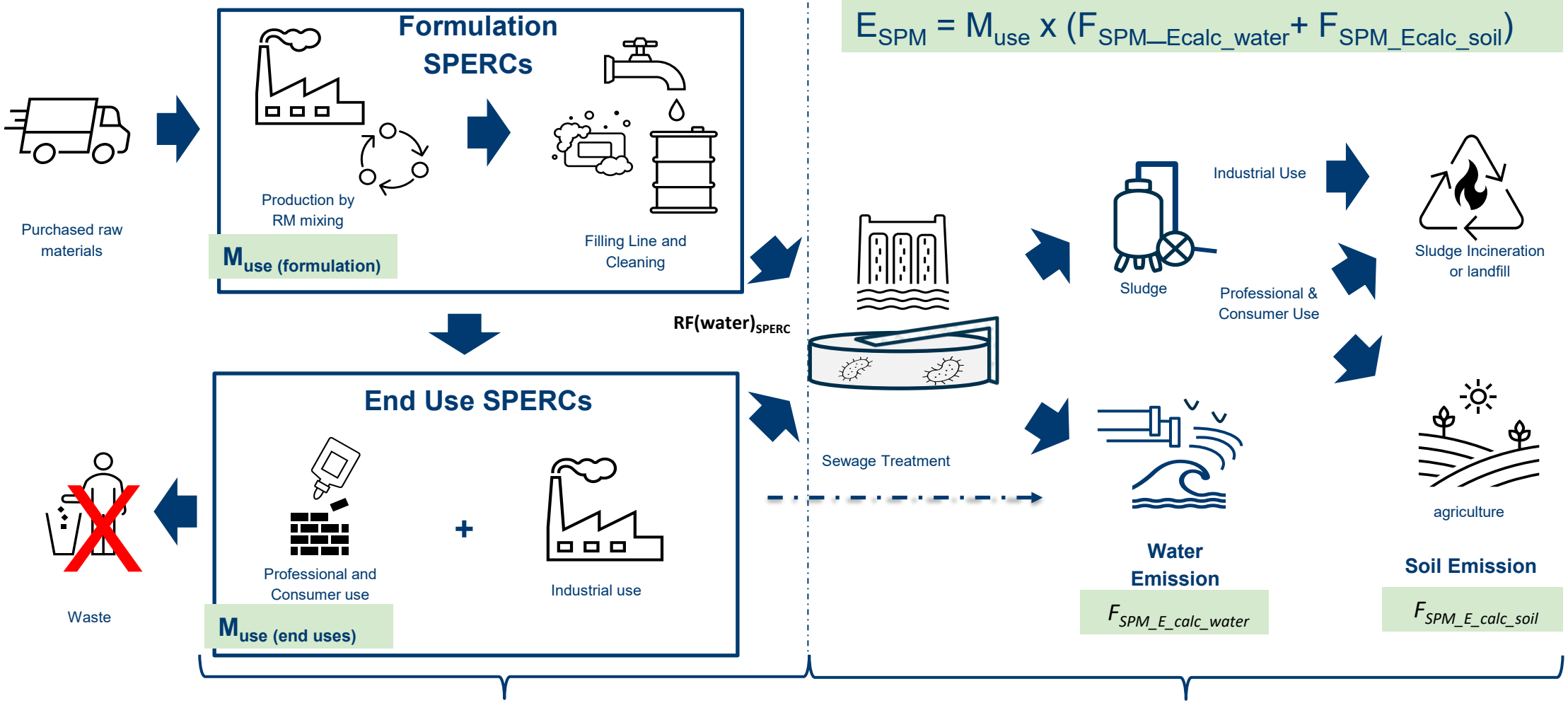
Sludge disposal in the EU

1. SPMs may enter into agricultural soil via sludge
2. No environmental emissions where sludge is disposed in landfills or is incinerated
3. EU countries differs significantly regarding STP sludge disposal



Generic principles of 'E_calc_SPM' (FEICA-example)

$$E_{SPM} = M_{use} \times (F_{SPM\_Ecalc\_water} + F_{SPM\_Ecalc\_soil})$$



SPERCs

→ Specific Environmental Release Factors
(FEICA interpretation: neglects RF air and soil)

EUROSTAT – EU Data

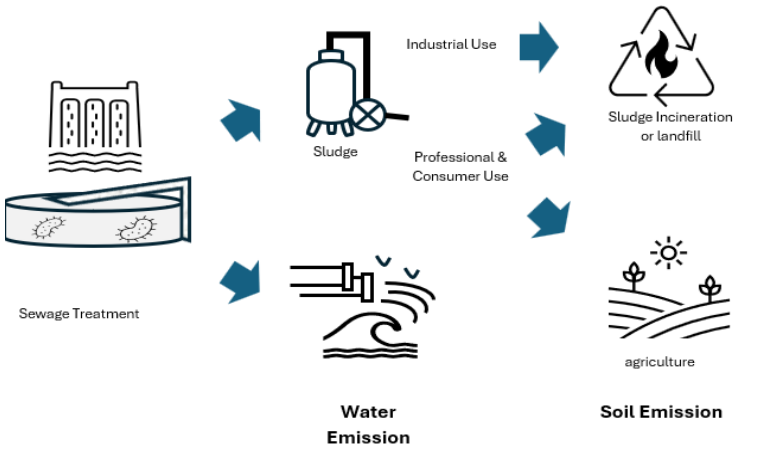
→ Wastewater Treatment and Sludge disposal

(M=Tonnage)

‘E_calc_SPM’ – input & model

Product Technology

Sector SPERCs



EUROSTAT – EU Data

→ Wastewater Treatment and Sludge disposal

1. User input:

   - The product technology triggers selection of relevant SPERCs
   - Amounts per use / formulation (M_{use})

2. Model:

   - SPERC defines release factors
   - SPM reduction efficiency per WWTP technology is taken from ECHA (2019)

   - Sewage treatment situation
     - % no treatment
     - % primary treatment
     - % secondary treatment
     - % higher treatment

   - Fate of sludge
     - % sludge incineration
     - % to landfill
     - % compost and agricultural use

Eurostat data for 2022:
- evaluated for 27 EU countries
- generic for EU per population equivalent

SPM emission factors per use

FEICA examples based on EU average data:

$$F_{SPM\_Ecalc\_env(SPERC)} = F_{SPM\_Ecalc\_water} + F_{SPM\_Ecalc\_soil}$$

Life cycle step	Use description (acc. to SPERCs)	SPM to water $F_{SPM\_Ecalc\_water}$	SPM to soil $F_{SPM\_Ecalc\_soil}$	SPM to environm. $F_{SPM\_Ecalc\_env\ (SPERC)}$
Formulation	1. Formulation of SPM in Solvent-borne and Solventless Adhesives / Sealants and Construction Chemical Products	0.0026%	0.0093%	**0.0119%**
	2. Formulation of SPM in Water-borne Adhesives / Sealants and Construction Chemical Products	0.0668%	0.2339%	**0.3007%**
Industrial Use	3. Formulation of SPM in Cementitious Construction Chemical Products and Tile Adhesives	0.000%	0.000%	**no emission**
	4. Industrial use of SPM Solvent-borne and Solvent-less Adhesives / Sealants	0.000%	0.000%	**no emission**
	5. Industrial use of SPM in Water-borne Adhesives / Sealants	0.0397%	0.1389%	**0.1786%**
Professional / Consumer Use	6. Widespread use of SPM in adhesives / sealants - indoor	0.1984%	0.6947%	**0.8931%**
	7. Widespread use of SPM in Adhesives/Sealants and Construction Chemical Products - outdoor	0.1984%	0.6947%	**0.8931%**

$$E_{SPM} = M_{use} \times F_{SPM\_Ecalc\_env(SPERC)}$$

4% ⇨ Calculation tool (FEICA)

Status of the E_calc_SPM proposal

- This draft proposal has been developed by BASF and Henkel
- IVK (German Adhesive Association) and Deutsche Bauchemie have approved the proposal and forwarded it to FEICA in Aug ‘24
- FEICA approved concept in October ’24 and initiated a TF to finalise approach. DUCC engagement started in Dec ’24 to adopt the proposed method as consensus method among the DUCC member associations
- Current: ECETOC TF - Objective: Outline of a pragmatic approach to estimate emissions of primary microplastic that qualify as SPM for a peer-reviewed publication (scientific acceptance)

Polymeric Microparticles from Products (E-calc_SPM)

Background

In 2023 the Commission put a restriction on “Synthetic Polymer Microparticles” (SPM) into force, la
down in entry 78 of Annex XVII of the REACH Regulation, as introduced by Commission Regulation (E
2023/2055 (COM 2023). The restriction entails a ban on the placing on the market of all polymers th
meet the SPM definition unless their specific use is derogated from the ban. Derogations from the b
on the placing on the market for certain cases exist where using the SPM or the product containi
them does not release SPM, or those releases can be prevented/minimised; or to avoid overregulati
of certain uses and sectors. For those derogated uses the restriction lays down requirements t
suppliers to provide instructions on how to handle and dispose the (SPM in the) product to prevent
minimise the SPM loss to the environment (the Instructions for Use and Disposal –“IFUD”) and t
reporting to ECHA on estimated environmental release of SPM , to monitor the effectiveness of IFU
and the restriction in general.

Objective

This paper addresses a generic approach for suppliers of SPM and SPM-containing mixtures, the ‘
calc_SPM”, on how to estimate environmental release of SPM. The approach is based on emissi
estimations of specific Environmental Release Categories (SPERCs) as developed by seve
downstream user associations for relevant steps of chemical substances during the substance l
cycle. Following the SPERCs approach, the E-calc SPM has a large applicability domain and is also bas
on conservative worst-case assumptions (Tier 1.5) which may lead to an overestimation of the relea
of SPM into the environment. Further emission pathways to water and soil are assessed by statisti
evaluation of sewage treatment connectivity and sludge disposal practices throughout Europ
However, it is acknowledged that due to the generic approach followed, there may be situations whe
an individual assessment may be more appropriate.

Scope

The definition of SPM refers to polymers with certain properties (solid, insoluble, non-biodegradal
and synthetic). As additional conditions, the corresponding polymer(s) must be part of a particle w
certain dimensions. Only those solid, insoluble, non-biodegradable and synthetic polymers that ma
up at least 1% by weight of particles with the corresponding dimensions or form a continuous surfa
coating on these particles are to be regarded as SPM and only this polymer content is to be taken in

Torsten Funk
FEICA consultant

Practical use of the FEICA calculation tool

FEICA Excel tool for E-Calc_SPM

- Supplementing the background document on E-Calc_SPM
- Simplified calculation of SPM emissions based on
  - SPM containing products and product type
  - Type of polymer based on ECHA list and its concentration in the product
  - Applicable derogation of the restriction
  - Quantities produced and sold
  - EU Member State of the production site
- Calculation and summary of the date to be reported to ECHA

FEICA Excel tool for E-Calc_SPM

- Some hints
  - Each legal entity has to report to ECHA separately; therefore use a separate Excel file
  - Products with more than one polymer type to be entered with one line per polymer type
  - Only EU quantities for production and use are relevant
  - In the case of one's own production, the EU Member State of the production site is used
    - => Country specific waste disposal date can be used

FEICA Excel tool for E-Calc_SPM

- Some hints
  - Results to be manually transferred into IUCLID
  - The E-Calc_SPM method based on SPERCs is very conservative and may overestimate emissions
  - Therefore, specific data on SPM emission if available are preferable

Q&A

- Please use the chat box if you have a question
- Questions in the chat box will be covered as we go along
- In case we don't have sufficient time during the Q&A session to address your question, please feel free to send your question to info@feica.eu

THANK YOU

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