National Institute for Public Health and the Environment
Ministry of Health, Welfare and Sport

baua: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin

KEMI Swedish Chemicals Agency

NORWEGIAN ENVIRONMENT AGENCY

Ministry of Environment and Food of Denmark
Environmental Protection Agency

2nd Stakeholder Consultation on a Restriction for PFAS

I. Reasons and aims of this analysis

The competent authorities for REACH of the Netherlands, Germany, Denmark, Sweden and Norway are currently preparing a REACH Annex XV Restriction Dossier for the group of PFAS (per- and polyfluoroalkyl substances) described below (as defined under Section II. Substances) since all these substances are considered to be persistent.

The consequences of this persistence include that the presence of these substances in the environment is practically irreversible, and pose an unacceptable risk to the environment and humans. All uses of PFAS (professional and industrial uses, consumer uses of mixtures and articles) result in emissions into the environment and contribute to the overall concentrations of PFAS in the environment. Many members of this group already occur ubiquitously in the environment and contaminate the ground- and untreated water due to their high mobility. In addition, some of these substances accumulate in biota and/or are suspected to be toxic.

In view of these properties, the above mentioned competent authorities for REACH are considering proposing EU-wide measures covering all PFAS (as defined under Section II. Substances) to reduce those risks.

This questionnaire is intended to provide you/the respondents with the current overview the five authorities have on the different uses of PFAS. By checking the presented data and providing feedback you/the respondents can ensure that the correct information is used for the assessment and preparation of a REACH Annex XV Restriction Dossier. Furthermore, you/the respondents can provide the authorities with currently still lacking information. EEA tonnages & emissions presented depict the European perspective, which the authorities created from the gathered information. If tonnages or emissions are challenged, please do so at European level, not at individual company level. For alternatives (and transition costs) this is slightly different and individual companies likely have valuable information.

I. Reasons and aims of this analysis

General:

The purpose of the 'investigation report summaries' (download is possible on the next page) is to present our current knowledge and understanding regarding uses of PFAS with a focus on use tonnages, emissions, alternatives and substitution costs, etc. The data are important for both risk assessment and the socio economic analysis (SEA).

The investigation report summaries have been prepared based on more detailed PFAS use investigations. It should be noted that these investigation report summaries should not be considered to be equivalent to the Annex XV restriction report, which is in a preparation phase.

Presented data reflect the current knowledge and during the project new data might become available. It is not guaranteed that the information presented here will be used in the Annex XV restriction report or in the presented way. For instance: Presented quantities or costs could be higher or lower.

The information provided is largely of a general nature and is not intended to address the specific circumstances of any particular individual or entity. Further, the information is not professional or legal advice. In case respondents fill out the survey several times, only the latest entry will be considered.

Scope:

This survey is intended to provide an opportunity for stakeholders to confirm the understanding of the five countries prepararing the restriction proposal, or provide updated information, on PFAS uses, including tonnages, emissions, alternatives and transition costs. Information can also be valuable, if it confirms estimates that are currently marked as uncertain by the five countries.

This survey is not intended as an opportunity to provide feedback on the essential use concept.

This survey is not intended as an opportunity to provide feedback on the (chemical) scope of the proposed restriction.

The use of PFAS in fire fighting foams is not part of this call for evidence. ECHA is preparing a separate Annex XV restriction dossier on this use.

Stakeholders are invited to add information on uses not mentioned in the report summaries under section A (general questions).

Public sources / literature references:

Presented numbers (i.a. tonnages & emissions) represent the situation in the European Economic Area (EEA). If you have a different view, please provide this information on EEA level with reference to public sources.

In case transition times are applicable due to substitution, please refer to the respective legal text where possible. In instances where the information presented in the investigation report summaries is challenged, but no reference to literature or public sources are made to justify such challenges, we are unlikely to be able to take the comments into account.

Others:

PFAS tonnages for the described uses cannot be added up for a full tonnage overview as this might lead to double counting. In case no information is available, the authorities will follow a reasonable worst-case approach when estimating emissions to the environment. Concerning the presented summaries, the authorities from the five countries do not accept any liability with regard to the use that may be made of the information contained. Use of the information in these summaries remains the sole responsibility of the reader. Although, the information provided in the summaries has been prepared with the utmost care,

possible errors or omissions cannot be excluded. The authorities from the five countries do not accept any liability with regards to any such errors or omissions.

II. PFAS in scope

As indicated by the name, per- and polyfluoroalkyl substances (PFASs) comprise a group of organic substances containing alkyl groups on which all or many of the hydrogen atoms have been replaced with fluorine as structural fragments.

PFAS in the scope of this call for evidence have the following structural formula:

X-(-CF_2-)n-X' with n ≥ 1 and X, X' not being H (thus including X-CF_3) meaning fluorinated substances that contain at least one aliphatic carbon atom that is both, saturated and fully fluorinated, i.e. any chemical with at least one perfluorinated methyl group (-CF_3) or at least one perfluorinated methylene group (-CF_2-), including branched fluoroalkyl groups and substances containing ether linkages, fluoropolymers and side chain fluorinated polymers.

Although all PFAS will be considered for regulation, a non-exhaustive list of the most frequently used substances and substance groups may be found in the supplementary document accompanying this questionnaire and consultation which can be downloaded under the following link: Supplementary document.pdf

III. Target group of this questionnaire

Questions are addressed to the whole supply chain including **industry associations, manufacturers, importers, distributors and downstream users**.

Of interest is information on **PFAS** and **alternatives to PFAS.** Both, PFAS as such and PFAS contained in mixtures and articles are of relevance. Alternatives include chemical (non-fluorinated) as well as technical replacements for PFAS.

Please note that this questionnaire consists of 66 pages in total. It will, however, allow you to navigate through blocks of questions depending on your type of information or data. Hence, you will be able to specifically respond to the questions relevant to you. There will be max. 4 pages of questions per use ticked in Section A (general questions).

In the table below, the hyperlinks on the right side will allow you to download summary reports for the different uses for which further information is requested. In some cases a second hyperlink is available. In these cases the lead authority assessing the use already published a summary report on their website.

Use	Hyperlinks to report summaries
Cleaning agents, polishes and waxes (non-industrial uses)	Report summary cleaning agents polishes waxes july 2021.pdf
Cosmetics	Report summary cosmetics july 2021.pdf
Food contact materials & packaging	Report summary food contact materials and packaging july 2021.pdf
Lubricants	Report summary lubricants july 2021.pdf
Construction products	Report summary construction products july 2021.pdf
Medical devices	Report summary medical devices july 2021.pdf
Medicinal products	Report summary medicinal products july 2021.pdf
Metal plating & manufacturing of metal products	Report summary metal plating and manufacturing of metal products july 2021.pdf
PFAS production (manufacturing)	Report summary PFAS and PFAS polymer production july 2021.pdf
Ski treatment	Report summary ski treatment july 2021.pdf PFAS in the treatment of skis - use, emissions and alternatives
TULAC (textiles, upholstery, leather, apparel and carpets)	Report summary TULAC july 2021.pdf
Petroleum & mining	Report summary petroleum and mining july 2021.pdf PFAS in mining and petroleum industry – use, emissions and alternatives
F-gas uses	Report summary F gas uses july 2021.pdf Application of Fluorinated Gases (F-Gases) in the European Economic Area
Electronics & energy	Report summary electronics and energy july 2021.pdf
Transportation	Report summary transportation july 2021.pdf
Waste	Report summary waste july 2021.pdf

IV. Information on institute/organisation/person & data protection rights

Information on institute/organisation/person & data protection rights can be downloaded via the following link: GDPR.pdf

Fields marked with * on this page are mandatory fields.

PERMISSION FOR INFORMATION PURPOSES: I agree to the personal data I provide in the present survey, including my name and my e-mail address, to be collected, processed and stored for potential follow-up questions regarding this survey by the service provider of the Federal Institute for Occupational Safety and Health (BAuA), namely Webropol Deutschland GmbH, and to these being subsequently stored in the database of the Federal Office for Chemicals.

(●) Yes ( ) No

Information on institute/organisation/person

Name *	WARIMEX GmbH; Germany – STONELINE® cookware brand
Surname *	Mr. Michael Schmiederer
Name of institute/organization	
E-Mail *	ms@warimex.de

Can we contact you with follow-up questions? *

(X) Yes

( ) No

Note on Confidentiality of information and data

I understand that it is my responsibility not to include confidential information in responses to general comments and in any responses to requests for specific information (e.g. company name, properties, assets, costs etc.). The competent authorities for REACH will not be held liable for any damages caused.
*

Ⓧ Yes

I understand that it is my responsibility to mark confidential data and attachments as confidential. *

Ⓧ Yes

V. Questions - Section A - General questions

For which use would you like to submit information? Please select all uses on which you would like to provide information.

- [ ] Cleaning agents, polishes, waxes (non-industrial uses)
- [ ] Cosmetics
- [X] Food contact materials & packaging
- [ ] Lubricants
- [ ] Construction products
- [ ] Medical devices
- [ ] Medicinal products
- [ ] Metal plating & manufacturing of metal products
- [ ] PFAS production (manufacturing)
- [ ] Ski treatment
- [ ] TULAC (textiles, upholstery, leather, apparel and carpets)
- [ ] Petroleum & mining
- [ ] F-gases
- [ ] Electronics & energy
- [ ] Transportation
- [ ] Waste

If relevant, please further specify your use (e.g. textiles used in personal protective equipment).

We are suppling EU consumers with non-stick coated articles (cook- and bakeware and other kitchenware) and these often have coatings of 20-40 micrometers thickness, which consists of about 50 percent by weight of the fluoropolymers PTFE, FEP and PFA.

We estimate, that around 90 percent of our actual yearly sales volume in weight of non-stick coated kitchenware is coated with fluoropolymers.

Are certain uses of PFAS missing in the categories above?

We see no toxicological, health or environmental problems with our products that justifies to take them into account in this evaluation for the usage restriction of harmful substances.

Due to four reasons we deny to integrate fluoropolymers into the PFAS substance group selection:

1. Persistency is not given/significant/applicable:
We deny that it makes sense to add the fluoropolymers PTFE, FEP and PFA to the PFAS definition of this restriction procedure, because the decisive reason "persistence" is not given under REACH definition.

The colloquial persistence of the fluorinated non-stick coatings is an application requirement as with many construction materials (stainless steel, ceramics, glass).

The chemical law persistence as a reason for inclusion to this PFAS restriction process does not apply to the fluoropolymers used. REACH (and also chemical laws worldwide) definition of persistency, and all related OECD persistency half-life tests (OECD 306-309), are meaningless for polymers, and only apply for soluble substances occurring as single molecules.

2. Non-hazardous materials are not in the scope of a REACH substance usage restriction:
Procedures under chemical law to restrict the use of harmful substances have so far only regulated the use of dangerous substances in the EU, but not the use of non-dangerous materials (as e.g. fluoropolymers). In our opinion, this new purpose is outside the scope of REACH.

3.Polymers are not in the scope of REACH
Polymers themselves are excluded under REACH, but the current PFAS procedure implies that fluoropolymers could be restricted, as the questionnaire almost always does not differentiate between the physically, chemically, toxicologically and environmentally completely contrary properties of fluoropolymers and the concerning low molecular weight PFAS.

4. Non-scientific grouping of materials
As fluoropolymers (PTFE, PFA and FEP) shows contrary physical, chemical, toxicological and environmental properties compared with low molecular weight PFAS, the scientific grouping rule ("group only similar substances") is violated. This questionnaire demonstrates, that this is not even remedied via subgrouping.

■ ■ ■

V. Questions - Section B - Food contact materials & packaging
Questions in relation to the use (mainly for industry associations)

The following linked information presents the current picture: Report summary food contact materials and packaging july 2021.pdf

In the tables presented on this page and the following, '?' in the cells show that the authorities do not have any information available. Input to fill these gaps is highly appreciated.

Sub-Use	Tonnage (tonnes/PFAS) per year in the EEA PFAS solely polymers in table	Expected trend (--/-/0/+/++)[1]	Emissions/year in EEA[2] (tonnes/PFAS)
Packaging	Product: 41,351,000 (paper and board) Product: 20,500,000 (plastic packaging) PFAS: 827 - 4,962 (in paper and board) PFAS: ? (for plastic packaging)	+ (3%)	124 - 871
Cookware	Product: ? PFAS: 3,500 (Plastic Europe, AFW, 2017)	+ (5%)	1,633 - 4,716 (mainly recoating emissions)
Industrial applications	Product: ? PFAS: 3,000[3] (Plastic Europe, AFW, 2017)	++ (10 - 20%)	

[1] -- = strong decrease, - = decrease, + = increase, ++ = strong increase, 0 = neutral

[2] Emissions relate to mixture/article production and mixture/article use. They do not include PFAS production and the waste stage of the articles. These emissions are covered in a separate section.

[3] Including pharmaceuticals (could not be disaggregated).

Do you have information that indicates that the information provided on the tonnage should be adjusted?

(x) Yes

( ) No

Please specify and/or refer to literature/public sources.

We fear that polymers and low molecular weight PFAS could be mixed up here.

As indicated in your "Report summary food contact materials and packaging july 2021.pdf" the figures of are from 2015 and therefore too old for this restriction issue.

Do you have information that indicates that the information provided on the emissions should be adjusted?

(x) Yes

( ) No

Please specify and/or refer to literature/public sources.

We fear that polymers and low molecular weight substances could be mixed up here.

You calculated with figures of (only one?) Swedish recoaters for the emission/year and take it for whole Europe. The statistical coverage is too low and we object to use for cookware and industrial food contact applications the figures of the table above.

The environmental release category (ERC) is a key REACH use descriptor to define the release factors of a chemical substance in a specific use exposure scenario. It is used in various modelling tools to derive environmental exposure estimates. ERC default factors are used to estimate emissions of PFAS in three major life-cycle stages, namely the production stage including manufacture of substances, formulation of mixtures and production of articles, the 'in-use' stage, and the waste stage.

Please indicate if you have information on specific emission values (SPERCs) for (groups of) PFAS, based on measurements and / or model calculations.

Fluoropolymers are not a source of emissions, because they are solids, which cannot made airborne or dissolved or made mobile in the environment.
Degradation products of fluoropolymer occur seldom, due to their extreme high chemical inertness and their very high thermal stability.

We doubt, if SPERCs are usable for solid polymers or for sub ppm traces of their degradation products or for sub ppm traces of their embedded and non-releasable fluorinated polymerization emulsifiers.

We fear that polymers and low molecular weight substances could be mixed up here.

Do you have information that indicates that the information provided on the expected trend should be adjusted?

(X) Yes

( ) No

Please specify and/or refer to literature/public sources.

According to our experience, we see these trends:
(-- = strong decrease, - = decrease, + = increase, ++ = strong increase, 0 = neutral)

Cookware	with fluorinated non-stick coatings	--	strong decrease

Do you have information on risk management measures to minimize the use, human exposure and emissions to the environment for your application of PFAS?

( )Yes

(X) No

Please specify and/or refer to literature/public sources.
We warn not to mix up polymers and low molecular weight substances here.

No, because fluoropolymers need not such risk management law demands measures and none for them.

Yes, because low molecular weight PFAS which are used as polymer processing aids for better emulsifying during the polymer reaction are already risk assed for human exposure (migration from plastics with food contact) and are stated with positive approval list in EU regulation 10/2011.

See EU regulations about PFOA, PFOS, PFHxA and C9-12 PFAS.
Our suppliers confirm compliance with these.

Fluoropolymers itself cannot be an emission, as they can neither be airborne, nor they can be dissolved.

V. Questions - Section C - Food contact material & packaging
Questions in relation to alternatives (mainly for individual companies)

Sub-Use	Non-PFAS alternatives
Packaging	- natural greaseproof paper - vegetable parchment - clay coatings - silicone
	- biopolymers (e.g. chitosan, starch, cellulose, polyvinyl alcohol, bioplastics such as polylactic acid (PLA), biowaxes) - synthesis plastics (e.g. low-density polyethylene (LDPE), linear low-density polyethylene (LLDPE), high density polyethylene (HDPE), polypropylene (PE), ethylene vinyl alcohol (EVOH), polyvinyl alcohol (PVOH), polyvinylidene chloride (PVDC), polyethylene terephthalate (PET)) - microfibrillar cellulose (MFC), cellulose nanofibrils (CNFs), cellulose nanocrystals (CNCs) - aqueous dispersions of co-polymers (e.g. styrene acrylic emulsion (SAE)) - aqueous dispersions of waxes (e.g. TopScreen) - water soluble hydroxyethylcellulose (HEC) - alkyl succinic anhydride (ASA), alkyl ketene dimer (AKD) - aluminium foil - lamination using impermeable barriers - other plant fibres (miscanthus, etc.) - bitumen coating - re-usable materials

Consumer cookware	- 'ceramic' coatings (sol-gel) as replacement of coating material - silicone coatings as replacement of coating material - silicone cookware (not coated metal) as alternative base material, uncoated - superhydrophobic coatings and hydrophobic coatings as replacement of coating material (Nanoscopic layer which is able to resist water. They are made from different materials like zinc oxide polystyrene, precipitated calcium carbonate, carbon nano-tube substances, manganese oxide polystyrene.) - enamelled cast iron / seasoned cast iron as alternative base material and non-stick coating - full ceramic cookware (not just coated) as alternative base material - carbon steel as alternative base material, uncoated - anodized aluminium coating as alternative base material, may be coated - stainless steel as alternative base material, uncoated - copper as alternative base material, uncoated
Industrial applications	- stainless steel - ceramic coatings - silicone and silicone coatings - synthetic rubbers and similar compounds (nitrile rubber, ethylene propylene rubber, neoprene, PES (polyethersulfone))

What is the specific application/functionality of PFAS in your product(s)/processes?

According to our suppliers, low-molecular weight PFAS are not added in the coatings of our applications, with the exemption of the non-releasable embedded residues of polymer processing aids (fluorinated emulsifiers) in fluoropolymers. These are technically needed for the polymerization from the fluoropolymer manufactures.

Regarding fluoropolymers:
Their usage in coatings provides a maximum non-stick effect.

Pans or pots coated with fluoropolymers are easier to clean than other cookware, and require little or no additional oil or fat to prevent sticking, a property that helps to produce lower fat food,
it helps to spare detergents,
to spare cleaning utensils,
to spare water,
to spare hot water heating,
to spare wasted burnt food and
spares negative health effects via sparing digestion of partly burnt food with CMR-properties do to partly overheating.

Similar for bakeware.

Are in your view the listed non-PFAS alternatives technically feasible in your product(s)/processes?

◯ Yes

Ⓧ No

Please specify why.

Cookware consumer usage	Bakeware consumer usage	
'ceramic' coatings (sol-gel) as replacement of coating material		
about 1/2 outlast due to fading non-stick effect, after abrasion non-stick disappears; salt water cooking reduces non-stick effect; decreasing non-stick effect at temperatures > 220°C and with fatty foods	For coil coating as main process for bakeware articles in Europe technically not feasible, because the coating is too brittle. The seldom-used process spraying (mainly done in Asia) needs special substrate and pre-treatment, which raises costs x2 and it provides much more wet coating waste.	
silicone coatings as replacement of coating material We understand and answer for silicone modified polyester		
no usage, because: no dishwasher resistance; insufficient non-stick effect; insufficient temperature resistance	about 1/4 outlast less non-stick effect; especially for savoury not suitable	
silicone cookware (not coated metal) as alternative base material, uncoated		
not usable, because too soft and not heat resistant enough for stove top	reduced lifetime, because fatty food absorbed by the silicon mould; usable only up to 200°C	
superhydrophobic coatings and hydrophobic coatings as replacement of coating material (Nanoscopic layer which is able to resist water. They are made from different materials like zinc oxide polystyrene, precipitated calcium carbonate, carbon nano-tube substances, manganese oxide polystyrene.) These are much more research ideas and projects and much less applicable technologies. We see this not as alternatives.		
enamelled cast iron no non-stick effect; often cracks and flaking; high energy manufacturing; sometimes heavy metal migration* issues;	no non-stick effect; often cracks and flaking; high energy manufacturing; sometimes heavy metal migration* issues; very expensive	

seasoned cast iron as alternative base material and non-stick coating		
only non-stick effect with toxicological not assessed seasoning oil film; not for acetic food (tomatoes), due to iron corrosion; cannot fulfil food law metal migration limits for metals*, especially with acid food	only non-stick effect with toxicological not assessed seasoning oil film, not for acetic food (tomatoes), due to iron corrosion cannot fulfil food law metal migration limits for metals*, especially with acid food	.

full ceramic cookware (not just coated) as alternative base material		
no usage because unusable heat transfer on stove top and no non-stick effect	no non-stick effect easy food burning and high cleaning effort	

carbon steel as alternative base material, uncoated		
no usage because rusting and no non-stick effect; not for acetic food (tomatoes), due to iron corrosion cannot fulfil food law metal migration limits for metals*, especially with acid food	no usage because rusting and no non-stick effect; not for acetic food (tomatoes), due to iron corrosion; cannot fulfil food law metal migration limits for metals*, especially with acid food	

anodized aluminium coating as alternative base material, ~~may be coated~~		
no non-stick effect; no acetic food (tomatoes) due to aluminium corrosion; high cleaning effort; metal migration with acid food too high; cannot fulfil food law metal migration limits for metals*	no non-stick effect; no acetic food or lye roll due to aluminium corrosion; metal migration with acid food too high; cannot fulfil food law metal migration limits for metals*	

stainless steel as alternative base material, uncoated		
no non-stick effect; easy food burning and high cleaning effort; problematic for persons with Ni allergies; slowly increasing Co content due to recycling; expensive material	no usage, due to missing non-stick effect	

copper as alternative base material, uncoated		
no non-stick effect; seldom used; not suitable for acidic food as wine, fruit juice, vinegar due to copper migration* danger	not used no non-stick effect copper migration* danger expensive	

Are in your view the listed non-PFAS alternatives economically feasible in your product(s)/processes?

◯ Yes

Ⓧ No

Please specify why.

See comments to the technical feasibility.

Do you have information on the alternatives' risk profile?

Ⓧ Yes

◯ No

Please describe.

See comments to the technical feasibility
All alternatives to fluoropolymer coated non-stick articles result in less non-stick effect.
A reduction of the non-stick effect means an increase of partly burnt food parts with CMR-properties.
It also means more usage of oil with negative impact to a low fat nutrition.

Are there legal approval schemes for your product(s)/processes, which have to be taken into account in case PFAS alternatives will be used?

◯ Yes

Ⓧ No

Please specify and/or refer to literature/public sources.

No answer

What is the average approval time?

No answer

Do you actively work on finding alternatives?

◯ Yes

Ⓧ No

Please specify.

If alternatives have been identified as potentially suitable, which timescale do you foresee for a complete transition to those? Please explain. No answer

Do you have information on additional alternatives for any of the described applications that have not been disclosed in the attached information? No answer

V. Questions - Section D - Food contact material & packaging Questions in relation to impact of legislative measures (for companies and industry associations)

What is the economic impact (in euro) and social impact (e.g. jobs) on your business/company if the use of PFAS is prohibited?

a) In 3 years.

Low molecular weight PFAS are needed as emulsifier during the production of fluoropolymers. Such emulsifiers are removed as far as technically possible by polymer producers and remain food law assessed and regulated completely (because below the given migration limits) in the fluoropolymer matrix.

Development efforts to produce fluoropolymers without the need of low molecular weight PFA as emulsifiers would increase. Up to now such qualities suitable for non-stick coatings on metals for kitchenware are not available.
Actually, a complete ban of low-molecular weight PFAS is nearly identical with a ban of fluoropolymers itself.

As all technical alternatives provide less non-stick effect than fluoropolymer contain coatings, a ban would create for consumers and industrial usages:

- longer cleaning times
- more need for detergents
- more need for cleaning utensils
- more need for cleaning water
- more energy need for hot water

And solely for consumers:

- More negative health effects via more consume of partly burnt food with CMR-properties due to partly food overheating.
- more wasted burnt food
- More usage of cooking oil with less benefit for low fat nutrition.

These impacts should be considered before setting a restriction proposal and for the concerned part of the EU population.

Any restriction on fluoropolymers will likely have to withstand judicial review.

b) In 10 years.

See a) and
We fear terrible consequences like job loss and significant decline in sale
Any restriction on fluoropolymers will likely have to withstand judicial review.

c) Please explain by providing your calculations.

Calculations are based on past sales figures and future prognoses.
50 people will loose their job here in 77743 Neuried / Germany
as well as a turnover lost of appr. 50 Mio Euros in our company.

What is the economic impact (euro) on your business/company, if the following measures will become mandatory? Please make your (indicative) calculations transparent.

a) A maximum concentration of e.g. 0.1% (or less) PFAS is set in mixtures and/or articles.

If only low-molecular weight PFAS are meant: No influence, because they do not exceed this limit.

If also fluoropolymers against scientific and substance risk management selection rules are meant:
This would be a ban of fluoropolymers with the above describes consequences (see a) in 3 years)

Any restriction on fluoropolymers will likely have to withstand judicial review.

b) Obligation to label your products visibly with "Contains PFAS".

If low molecular weight PFAS and fluoropolymers are meant:
Likely to become a quality label, due to consumer indication of superior non-stick performance compared with non-labeled products.

If only low molecular weight PFAS are meant, the pressure for the development of fluorpolymers, which are polimerized without fluorinated polymer processing aids (=low molecular weight PFAS) could perhaps create such polymers in several years.

Any restriction on fluoropolymers will likely have to withstand judicial review.

c) Obligation to report amount of PFAS in use and respective emissions.

Again it is astonishing, that this question of national competent authorities ignores the difference between a non-toxic construction material and a toxic molecular occurring substance class.

Regarding low molecular weight PFAS:

Depends on a given substance concentration threshold.
If confirmable in the supply chain and no measurements are needed:
Small additional effort: costs and additional bureaucratic actions

If measurements are needed:
Big additional effort: costs, additional bureaucratic actions and measurements

Regarding fluoropolymers:

If confirmable in the supply chain and no measurements are needed:
Small additional effort: costs and additional bureaucratic actions

Any regulation on fluoropolymers will likely have to withstand judicial review.

d) Specific waste management requirements with the obligation to collect, treat or recycle PFAS containing waste separately.

We assume, that only polymeric PFAS are meant, because the traces of non-polymeric PFAS are uncollectable low:

The fluoropolymer content of metallic cook- and bakeware is < 0,1 % weight/weight and only removable via sand blasting or burning of the non-stick coating.
Both actions would increase mobility and substance risks in the first step.

Any recycling would have to focus on the aluminum and iron of the cook+bakeware. .
The mainly iron containing inlays for enabling induction cooking are hardly separable from aluminum pans.

Any regulation on fluoropolymers will likely have to withstand judicial review.

e) In case you are using PFAS polymers: no PFAS processing aids are allowed during polymer production.

Actually and after years of development efforts no fluoropolymer qualities suitable for non-stick coatings are available from the polymer producer. According to some suppliers, such qualities may never be possible.

A ban of fluorinated polymer processing aids is a ban of fluoropolymers for non-stick coatings.

Any regulation on fluoropolymers will likely have to withstand judicial review.

V. Questions - Section E - Food contact material & packaging
Specific questions for the use

If available, please provide information that allows a quantitative estimation of PFAS emissions during the manufacture of consumer and industrial applications as well as food packaging material.

Fluoropolymers cannot be emissions, therefore we conclude, that you here mean non-polymeric PFAS.

Smoke and gases in the production lines of curing oven exhaustions may include low molecular weight PFAS.
If such smokes and gases are not included in waste stream,
if fluoropolymers are the single source of fluorine in the oven
and if the amount of gaseous fluoro (hydro) carbons can be subtracted, then the total fluorine content of such exhaustion emissions could be considered for low molecular weight PFAS estimations and stated in figures.

If available, please provide data on (PFAS impurities in) polymer production aids emission during the production of consumer cookware & industrial applications.

The producer of fluoropolymers already reduced the fluorinated emulsifiers (non-polymeric PFAS) as much as technical possible (which is also driven by the REACH measurements for PFOA, PFOS and C9-C12 PFAS, as we got confirmed from our suppliers.

The producer of non-stick coatings for cookware and industrial applications do not add any low molecular weight PFAS in their production process, as we got confirmed from them.

If available, please provide information on the use of fluorinated gas or fluorinated processing aids in plastic packaging production (food as well as non-food packaging).

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