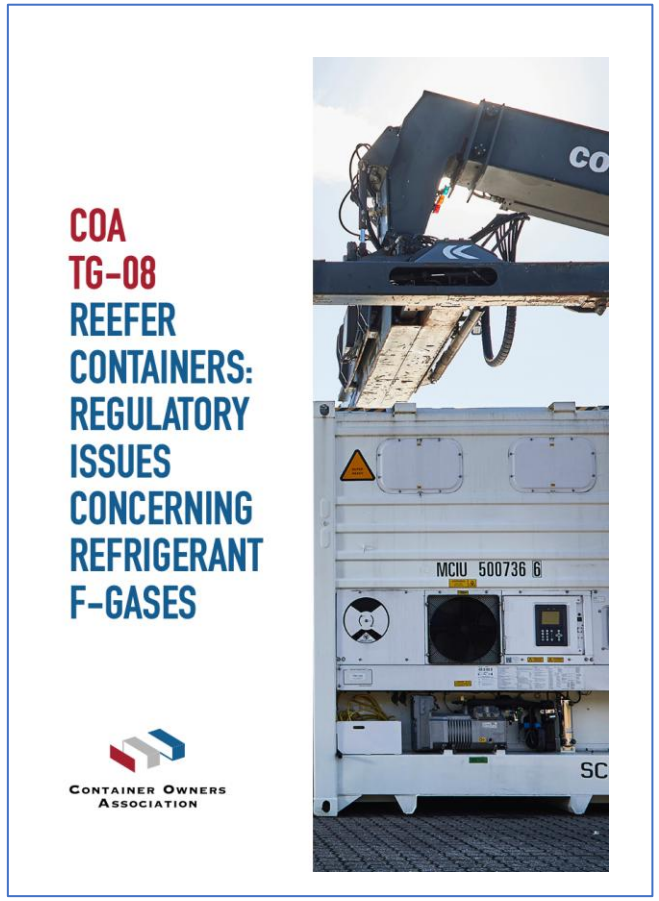
REEFER REFRIGERANTS SEAC CONSULTATION



AGENDA:

- ANTI-TRUST STATEMENT
- RE-CAP
- PFAS ECHA/SEAC CONSULTATION PROCESS
- F-GAS EU REGULATIONS
- FOR AND AGAINST PARTICIPATION
- OPEN FORUM TO PROPOSE A WG ACTION PLAN
- ACTION PLAN SUMMARY

RECAP

2023:	EU's REACH PFAS restriction formally initiated ECHA published restriction proposal of about 10,000 substances including F-gases, PTFE Sealing, Electronics, Insulation Public consultation (5600 responses)
2023 – 2025:	ECHA review process
2025:	Published proposed restrictions
2026:	SEAC Public consultation
2026-2030?	EU Commission regulatory process
Nb.	Other countries also engaged in various processes for PFAS restrictions

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
ECHA: European Chemical Agency
SEAC: Socio Economics Analysis Committee

PFAS: ECHA/SEAC CONSULTATION

- Respond to questions posed by ECHA/SEAC
- Feedback entered directly into the question fields
- Provide availability and feasibility of alternatives
- Attachments not permitted
- Consultation is open to all interested parties, including industry representatives, non-governmental organisations, researchers and members of the public.
- ECHA to confirm precise start date in March 2026.

SEAC CONSULTATION QUESTIONS (EXAMPLE 1.21)

#	Question	Response options	Instructions
1.21	What is the availability of alternatives for this use/application? Select all options that apply in general for this use/application and provide an explanation of each point in the next question.	Multiple choice: 1. **Alternatives are not available due to insufficient quantities**: PFAS-free alternatives are not available in sufficient quantities for this use/application. 2. **Alternatives are not available because of safety concerns**: PFAS-free alternatives are not safer for human health or the environment. 3. **Alternatives are not available because of technical feasibility**: PFAS-free alternatives do not meet the functional requirements for this use/application. 4. **Alternatives are not available because of economic feasibility**: It is not possible to operate profitably using the alternatives. 5. **None of the above - Alternatives are available**: There are suitable alternatives for this use/application. They exist in sufficient quantities, they are safer	Select the option that best describes the overall situation for application(s) you described above. If your response concerns multiple applications, you can provide more detailed information for each application and its alternatives in the question below.

SEAC CONSULTATION QUESTIONS (Example 1.23)

#	Question	Response options	Instructions
1.23	How many years would it take to develop alternatives to a stage where they can be implemented for the use/application?	Numerical (Years: 0 to 20+).	If you cover several applications in your response, provide an estimate that allows PFAS to be substituted in all of them. If you cannot provide an estimate, do respond to the question.
1.24	What is the total annual volume (tonnes) of PFAS used (or imported) for this specific use/application in the EEA?	Numerical by type (tonnes/year): 1. Non-polymeric PFAS 2. Polymeric PFAS 3. Fluorinated gases	Provide the annual volume (tonnes) for each type of PFAS used (or imported) in the EEA by your organisation, or by the organisations included in your response if reporting for a group. Do not include tonnages used outside the EEA.
1.25	If PFAS could not be used in this use/application, what would be the most likely impact on organisation(s) covered by your response?	Single choice: 1. Permanent closure of business or parts of it (including relocation outside EU) 2. Temporary closure of business or parts of it (including relocation outside EU) 3. Continued operations with increased costs or lower quality. 4. No impact or minor impact	Consider a situation where PFAS could not be used in this use/application by you or your competitors (including articles imported from outside the EEA). Select the option that best describes the situation for applications you described above. When responding on behalf of a group of organisations, choose the option that is most representative of the covered companies.

SEAC CONSULTATION QUESTIONS (EXAMPLE 1.29)

#	Question	Response options	Instructions
1.29	If PFAS could not be used in this use/application, what is the magnitude of potential negative impacts on society, e.g. from lack of access or worse quality of products (in addition to impacts on employment and profit losses)?	Single choice: 1. Very low or none 2. Low 3. Moderate 4. High 5. Very high 6. I do not know	Consider other societal impacts than profits or employment and indicate their expected magnitude. Impacts are considered greater, for example, when they affect large populations or significantly reduce quality of life. Do not include information on health and environmental impacts of PFAS itself.
1.30	Please explain your response to question above, e.g. by describing the elements leading to your judgement on the magnitude of additional impacts. If possible, provide quantified or monetised estimates of the impacts.	Free text (limit: 2000 characters)	Describe additional negative impacts, such as changes in quality of life resulting from reduced availability or lower quality of products. It is sufficient to describe the impacts, but quantified or monetised estimated can also be provided. Do not include information on health and environmental impacts of PFAS itself here, but in the general survey.

PFAS: ECHA REPORT OR PROPOSALS - 2025

- ECHA 2025 Background Document (Annex XV)
- Organised by sector categories.
- Annex A addresses F-Gas by sector applications and corresponding derogations tables.

PFAS: ANNEX A: F-GAS SECTOR APPLICATIONS

- Laboratory test and measurement equipment
- Centrifuges
- HVACR equipment
- Refrigerants (and related F-gases) used in transport applications, e.g.
  - mobile air-conditioning and heat pump systems in vehicles
  - transport refrigeration other than marine applications
- Maintenance and refilling of existing HVACR and related equipment
- Other - fire suppressing agents, insulating gases and more
- Nb: each item has proposed timelines and derogations

PFAS USE MAPPING

Focus F-Gas
Restrictions also apply to PFAS in Insulation, Electronics, Seals & Gaskets

PFAS Use-mapping

Annex to the Guidance for respondents to the consultation on the SEAC draft opinion on restricting per- and polyfluoroalkyl substances (PFAS)

Disclaimer: As the SEAC opinion making is still ongoing, there could be some minor changes to this use mapping when the consultation begins.

Table 1. Descriptions for the sectors containing uses of PFAS as identified in the draft Background Document. Note that the eight additional sectors listed in the updated Annex XV restriction report, which were not specifically evaluated by SEAC, have their sector name in the first column in italics.

Transport refrigeration	Transport refrigeration refers to PFAS used in refrigerants for systems that maintain temperature control during the transportation of goods (e.g. cooled or frozen products). The scope is limited to PFAS in refrigerant substances; PFAS in other components like seals or insulation are addressed under separate sub-uses/sectors	**Automotive applications**	Automotive applications of transport refrigeration refer to European vehicle categories L, M, N and O.
		Marine applications	Marine applications of transport refrigeration refers e.g. to reefer containers in marine transportation.
		Other applications	Any application of Transport refrigeration except automotive applications, marine applications and maintenance/repair.
		Maintenance/repair, including refilling, of existing equipment that was originally designed to use PFAS	This use refers to PFAS used in the maintenance or repair (including refilling) of existing equipment in the scope of Transport refrigeration.
Other transport uses	Other uses covers any uses that appear to fit the sector description but are not included among the uses identified above. Examples are devices for motion control solutions (e.g., flotation fluids in gyroscopes).		

- https://echa.europa.eu/documents/10162/17091/pfas_use-mapping_annex_to_guidance_for_respondents_en.pdf/e242dcf0-0aab-2619-234e-09445bb181c5?t=1765893415372

F-GAS REGULATION (EU) 2024/573

- Quota limits continue beyond 2030, **zero HFCs from 2050**.
- Ban on equipment where alternatives exist (e.g., domestic refrigerators, chillers, foams, aerosols).
- **No explicit F-Gas phase-out dates** for *transport refrigeration* (refrigerated cargo trucks, trailers, intermodal reefers)
- Mobile refrigeration addressed in **operational obligations** (leak checks, certification, containment) under **Article 5**
- **Regulatory milestone** – EU assessment by **1 July 2027** (Article 35(3)) might lead to *future legislative proposals* to include mobile refrigeration and fixed prohibition/phase-out dates.

PFAS: ANNEX A: F-GAS REGULATION (EU) 2024/573

Application	Proposed Derogation / Phase-out Timing
Refrigerants in low-temp refrigeration (<-50 °C)	Up to 6.5 years after entry into force (EiF)
Refrigerants in lab test & measurement equipment	Up to 13.5 years after EiF
Refrigerants in refrigerated centrifuges	Up to 13.5 years after EiF
Refrigerants in HVACR buildings (with safety code restrictions)	Indefinite (derogation remains)
Refrigerants for maintenance & refilling of existing units	Indefinite space to accommodate legacy equipment put on market before constraints
Refrigerants in vehicle HVAC & heat pump systems	Variable: 6.5 years for electric vehicles; 13.5 years for other vehicles under the draft scheme
Other fluorinated gas uses (e.g., insulating gases)	Typically 6.5 years after EiF or per application's timeline
These timelines define how long the use of PFAS, including F-gases, can continue after the restriction enters into force—effectively acting as the phase-out schedule/proposal in the restriction report.	

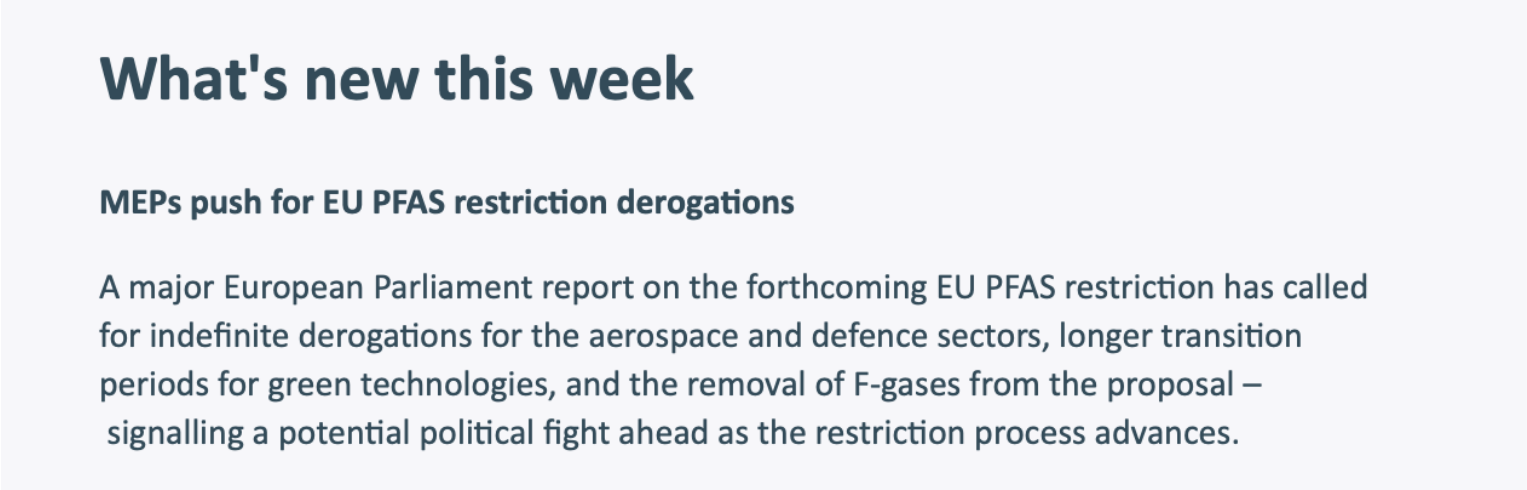
EU REGULATIONS FOR TEMPORARY IMPORT AND EXPORT OF FREIGHT CONTAINERS

- EU F-Gas regulations - applicability to international shipping reefers?
- Companies should review the relevance and obligation to the EU legislation to their specific circumstances
- Temporary import (max 24-mth) (Article 553)
- “Containers may be used in internal traffic before being re-exported, however they may be used only once during each stay in a member state” (Article 557)
- F-Gas restriction affects reefer servicing in EU

- EEC 2454/93 dated 07.1993 Chapter 5 Subsection 1.2
- Freight containers for maritime use - Article 557 - Subsection 1.2

EU POLITICAL INFLUENCE

- Chemical Week – Weekly newsletter 17.01.26



What's new this week

MEPs push for EU PFAS restriction derogations

A major European Parliament report on the forthcoming EU PFAS restriction has called for indefinite derogations for the aerospace and defence sectors, longer transition periods for green technologies, and the removal of F-gases from the proposal – signalling a potential political fight ahead as the restriction process advances.

- Create a strategy for Industry to lobby their national MEPs?

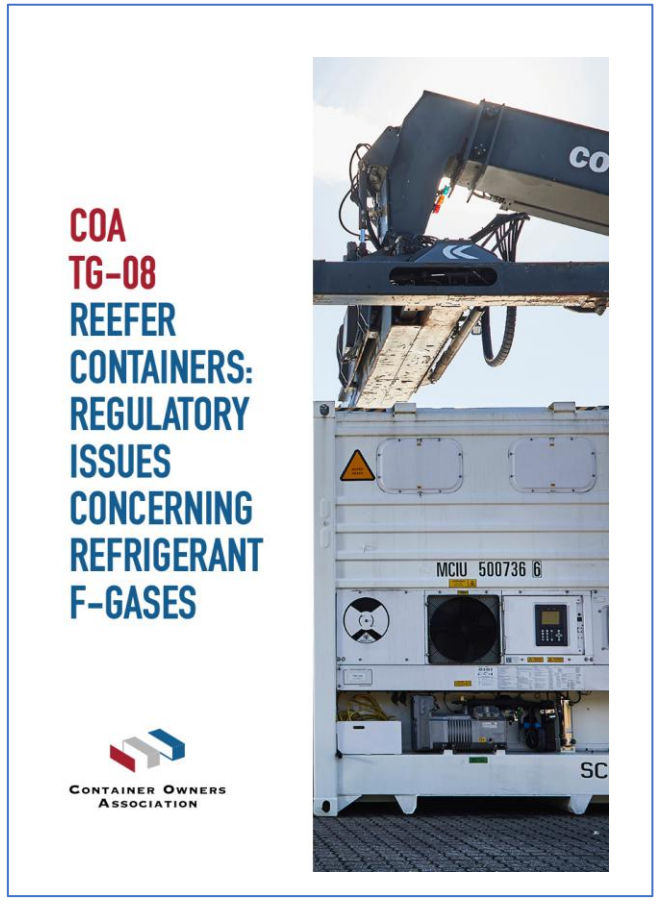
AGAINST: TAKING PART IN THE CONSULTATION

- EU F-Gas regulation in place - PFAS unlikely to contradict
- International reefers that operate under customs seal - outside scope of ECHA/SEAC
- SEAC prescribed questions unlikely to address international reefers
- Maintain a low profile and not draw regulatory attention to international reefers
- Similar F-gas restrictions proposed/in force in other countries/regions
- F-gas phase-out is a fact.
- Faced with the resources of opposition – what could COA achieve?

FOR: PARTICIPATION IN THE CONSULTATION

- Draw attention to the regulatory harm to unique international reefer trade
- Seek to alleviate the effects of the restriction on servicing reefers in Europe
- Response to SEAC prescribed questions could be construed to address international reefers
- Nothing to be lost by taking part

THANK YOU


COA
TG-08
REEFER
CONTAINERS:
REGULATORY
ISSUES
CONCERNING
REFRIGERANT
F-GASES
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