

# CHEMSEC WEBINAR

The webinar will begin shortly.

A recording of the webinar and the slides will be available afterwards.



## THREE INDISPENSABLE TOOLS TO HELP GET RID OF PFAS



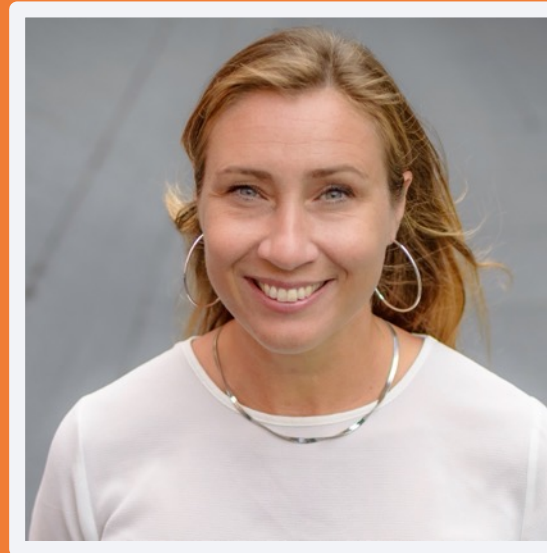


# THREE INDISPENSABLE TOOLS TO HELP GET RID OF PFAS



# AGENDA

- Introduction to ChemSec
- Introduction to the ChemSec tools
  - **The SIN list**
  - **ChemSec Marketplace**
  - **PFAS Guide**
- Q&A – use the Q&A function
- A recording of the webinar as well as the slides will be distributed to the registrants of the webinar



Dr Anna Lennquist



Dr Jonatan Kleimark

# WHAT WE DO AT CHEMSEC

- Drive the political discussion on hazardous chemicals
- Challenge companies to improve their chemicals management
- Develop online tools to help companies switch to safer chemicals
- Inform investors about risks and opportunities in the chemical industry





# CHEMSEC BUSINESS GROUP



EurEau

Polestar



adidas



ShawContract®



H&M Group



SONY®

SKANSKA



Kingfisher



# PFAS MOVEMENT MEMBERS







# Investor Initiative on Hazardous Chemicals

Supported by ChemSec



50+ INVESTORS  
\$10 TRILLION





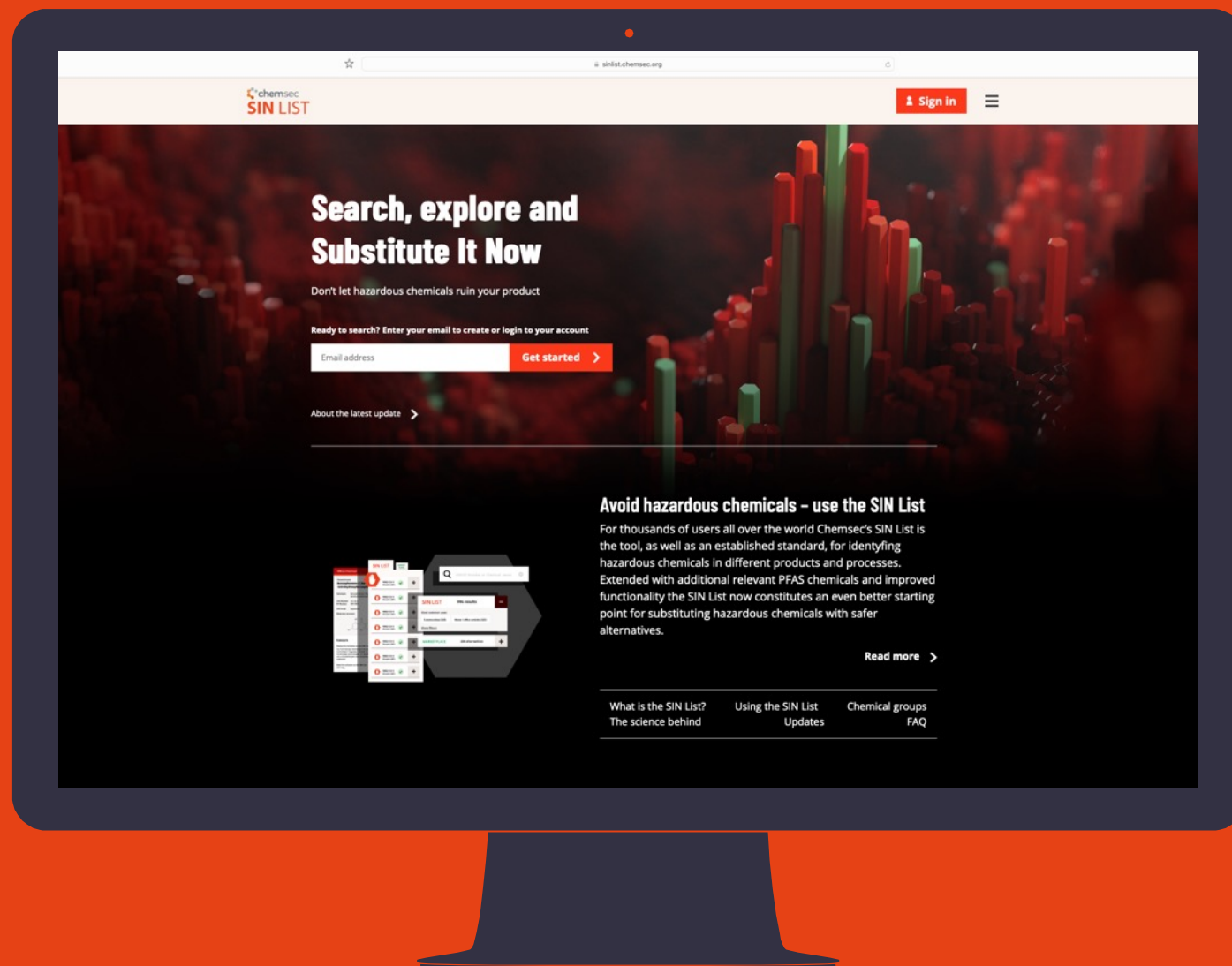
# AIM OF THE CHEMSEC TOOLS

- Support companies in substitution
- Be relevant and ahead of regulation
- Provide insights to future-proofing businesses
- Freely accessible
- Provide foundation for our investor and policy work



Substitute It Now!

A database of substances fulfilling criteria for regulation.

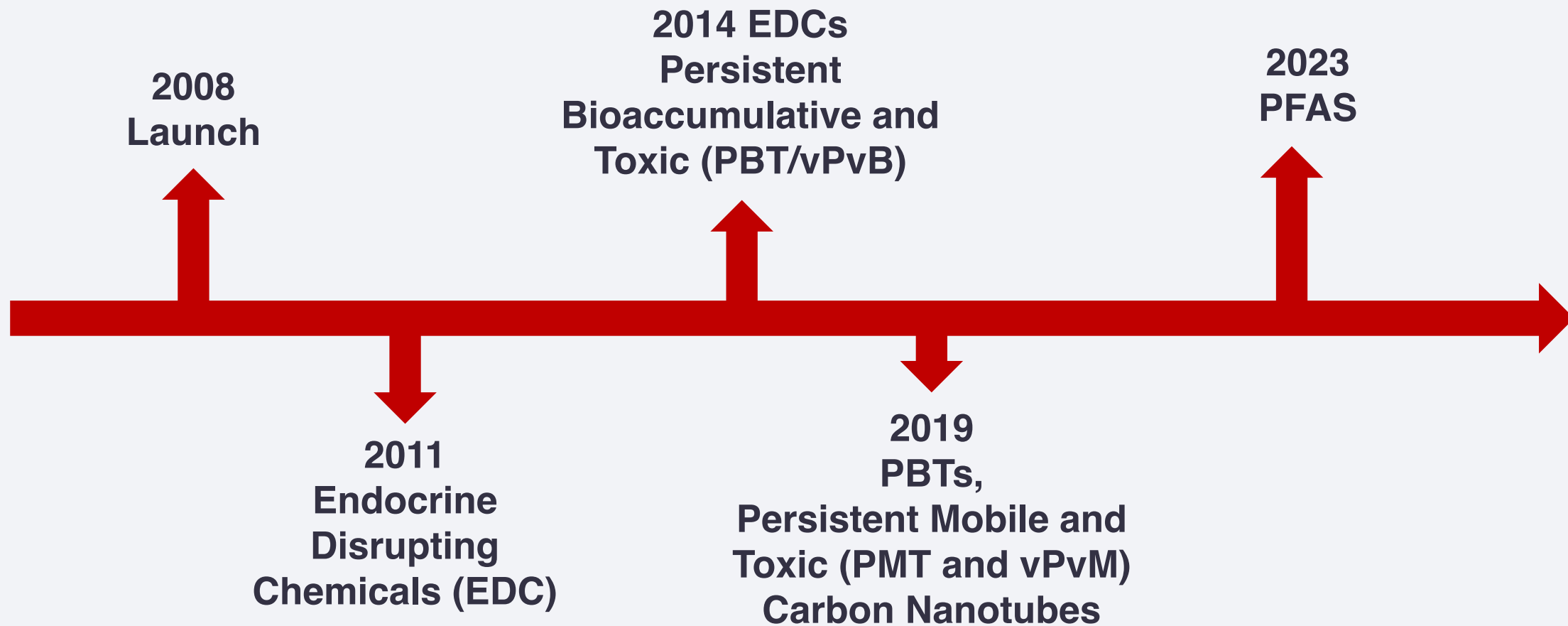




# SIN LIST

- REACH 2006
- Criteria for “*Substances of Very High Concern*” (SVHCs)
- What substances can we expect on the Candidate List?
- The answer:

SIN (Substitute It Now) List





# NARROWING DOWN THE PFAS UNIVERSE

- OECD 2017: 4,730 substances
- PFAS restriction – 10,000 substances
- PubChem Tree: More than 6 million
- SIN List: 416 PFAS (370 new)
- Which substances are most likely used in processes and products?
- Focus on substances registered in the EU and US and manually checking for uses







## SIN LIST USERS

- 40 000 visitors in one year
- 9 000 users with login accounts
- Most users from USA, Germany, Sweden, UK, France and China
- Users from companies in all parts of the supply chain and consultants
- Users from governments, academia, the investment community, standards and ecolabels



# Search, explore and Substitute It Now

Don't let hazardous chemicals ruin your product

Is it on SIN? Enter chemical name/CAS/EC

Search



Explore the database >

About the latest update >



# Search, explore and Substitute It Now

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Explore the database >

About the latest update >

Home

Search the SIN List 🔍

About

How to use the SIN List

Chemical groups

Updates

FAQ



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[Home](#)

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### What is the SIN List?

The SIN List is based on the EU REACH criteria

[Advisory Committee](#)

[Disclaimer](#)

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### How to use the SIN List

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#### Chemical groups

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[Focus: PFAS](#)

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[Focus: Endocrine disruptors](#)

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[Focus: Nanomaterials](#)

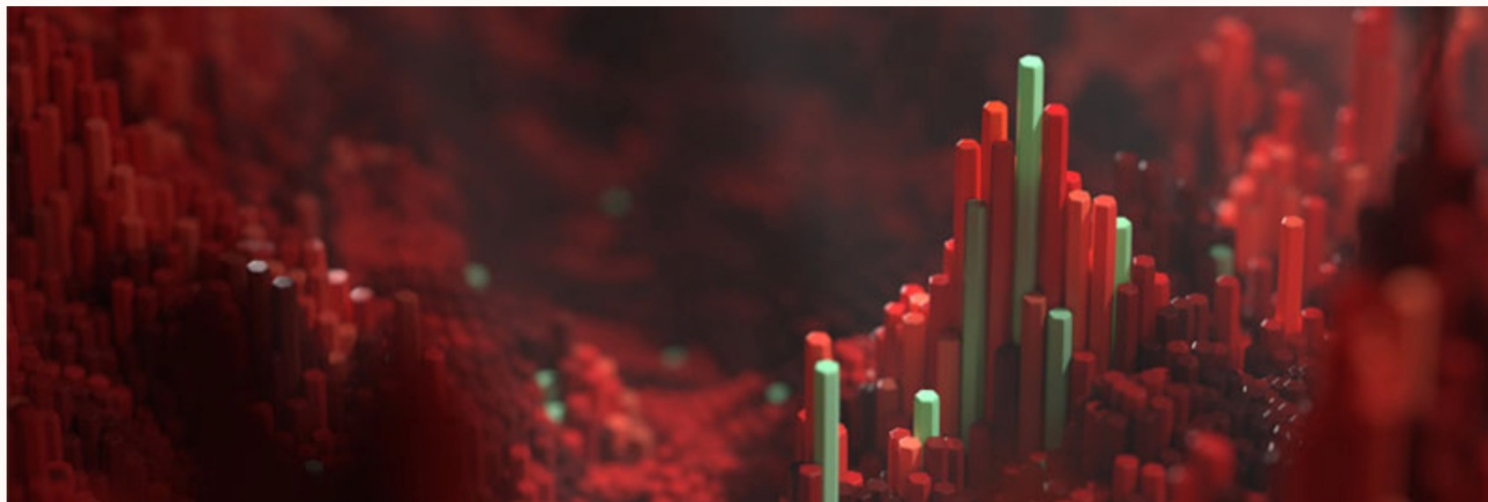
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[The science behind](#)

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[Updates](#)

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## What is the SIN List?

The SIN List is a list of hazardous chemicals that are used in a wide variety of articles, products and manufacturing processes around the globe. The SIN abbreviation – Substitute It Now – implies that these chemicals should be removed as soon as possible as they pose a threat to human health and the environment.

The SIN List is developed by the non-profit ChemSec in close collaboration with scientists and technical experts, as well as an advisory committee of leading environmental, health, consumer organisations. The list is based on credible, publicly available information from existing databases and scientific studies.

Home

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What is the SIN List?

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How to use the SIN List

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Chemical groups

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Focus: PFAS

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Focus: Endocrine disruptors

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Focus: Nanomaterials

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**The science behind**

General methodology

CMR identification

PBT/vPvB identification

ELoC identification

- EDC

- PMT

REACH and SVHCs

Nanomaterials as SVHCs



## The science behind the SIN List

The SIN List is a comprehensive list of substances that has been identified by ChemSec as fulfilling the criteria for Substances of Very High Concern (SVHC), as described in the EU chemicals regulation REACH article 57.

Three categories are included in REACH article 57, and the SIN List encompasses substances from these three categories:

- » The first category is chemicals that can cause cancer, alter DNA or damage reproductive systems. These are called CMR substances (Carcinogenic, Mutagenic or Toxic to reproduction).
- » Then there are harmful substances that do not easily break down and accumulate in the food chain. These are known as PBT substances (short for Persistent, Bio-accumulative and Toxic). There is also the abbreviation vPvB, short for very Persistent and very Bio-accumulative.
- » The third category is called "substances of equivalent concern". This category covers substances that are





# SIN List search



CAS/EC Number or Chemical name



Filter



Search tips

## Search results

View full list

SIN List Excel

**SIN LIST**

**1404 substances**

Most common uses:

Others (807)

Paints & pigments (473)

Plastics & rubber (412)

**MARKETPLACE**

**61 alternatives**

**Go to Marketplace**

**SIN LIST**

**MARKETPLACE**

Print

Result Excel

Share

Health and environmental concerns ⓘ +

Uses ⓘ +

Date added to the SIN List ⓘ +

REACH status ⓘ +

SIN group ⓘ +

Production volume ⓘ +

Producers ⓘ +

# SIN LIST search

## Search tips

## Search results

 View full list

 SIN List Excel

**SIN LIST**  
**416 substances**

**MARKETPLACE**  
**61 alternatives**

Most common uses:

- Others (807)
- Paints & pigments (473)
- Plastics & rubber (412)


**Go to Marketplace**

**SIN LIST**

**MARKETPLACE**

 Print

 Result Excel

 Share

**416 substances**

Alternative on

### Filter



Health and environmental concerns ⓘ +

Uses ⓘ +

Date added to the SIN List ⓘ +

REACH status ⓘ +

SIN group ⓘ -

**PFAS (416) ×**

pfas ×

Toxic metals and metalloids (269)

Petroleum (240)

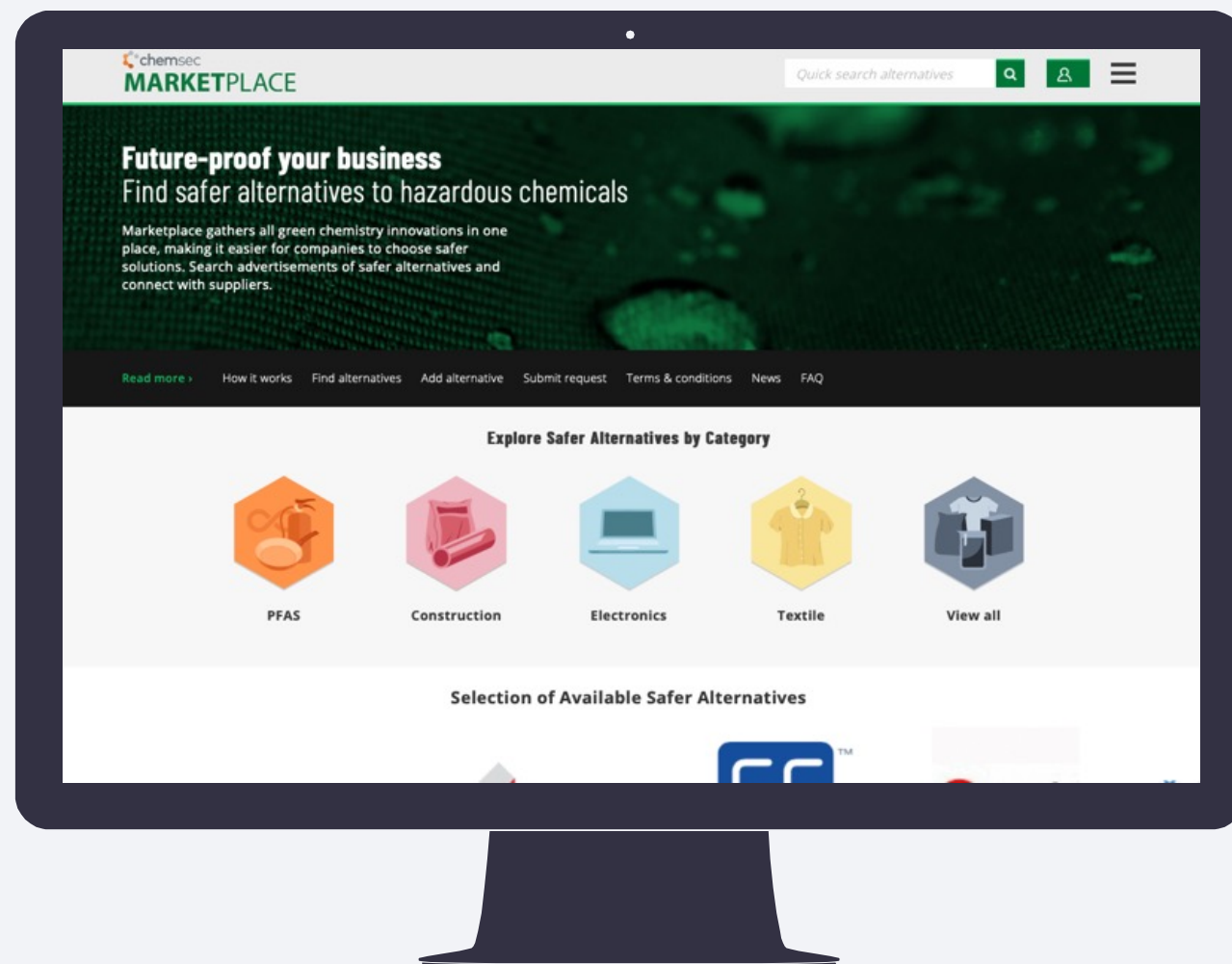
Nitrogen compounds (152)





# MARKETPLACE

A B2B platform to connect providers of **safer alternatives** with potential buyers



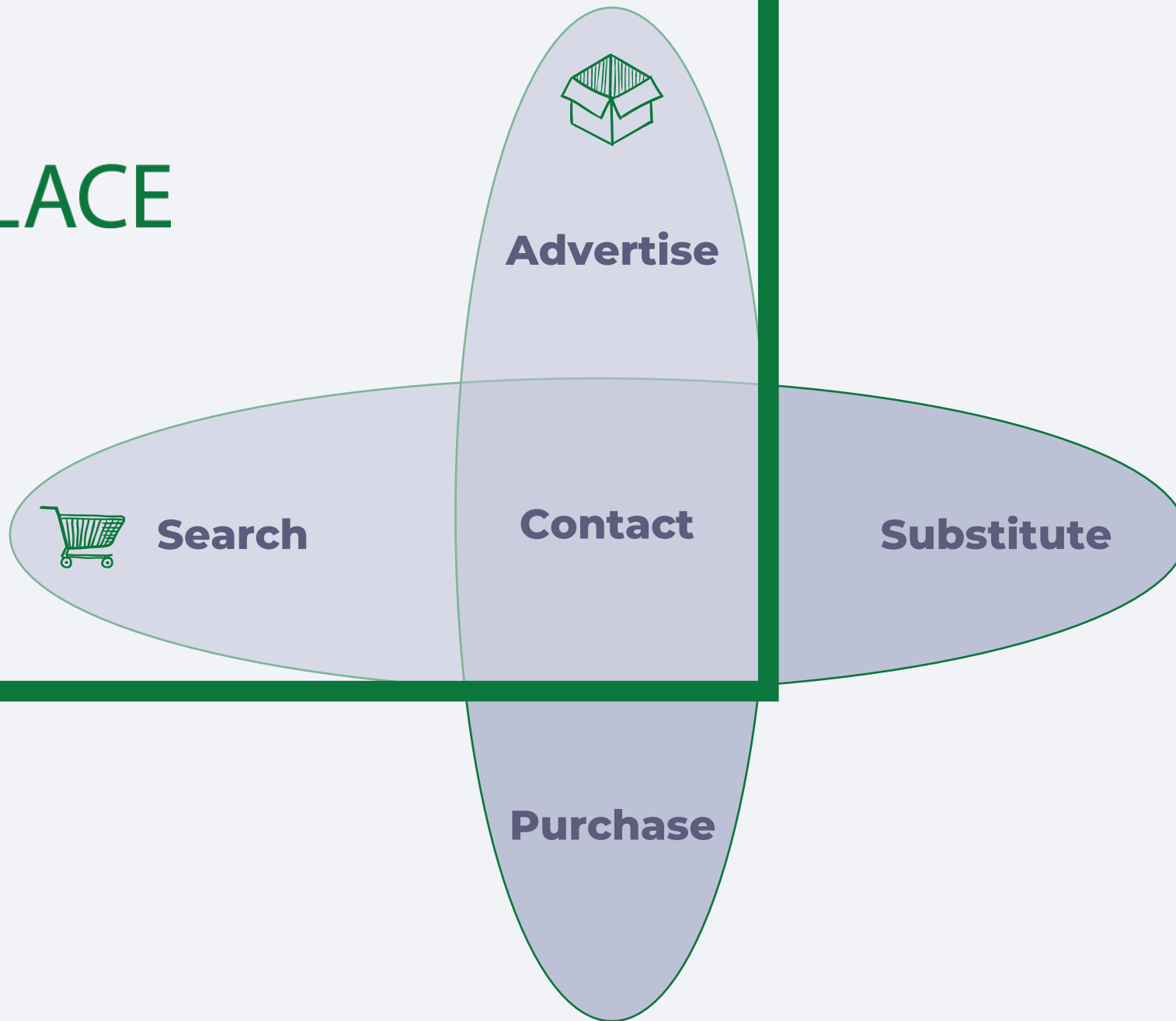
# AIM OF MARKETPLACE

- Increase visibility of alternatives to hazardous chemicals
- Increase availability of alternatives to hazardous chemicals
- Highlight areas and sectors where alternatives are available
- Identify uses and functions where alternatives are not available
- Support policymakers to take informed decisions






chemsec  
**MARKETPLACE**

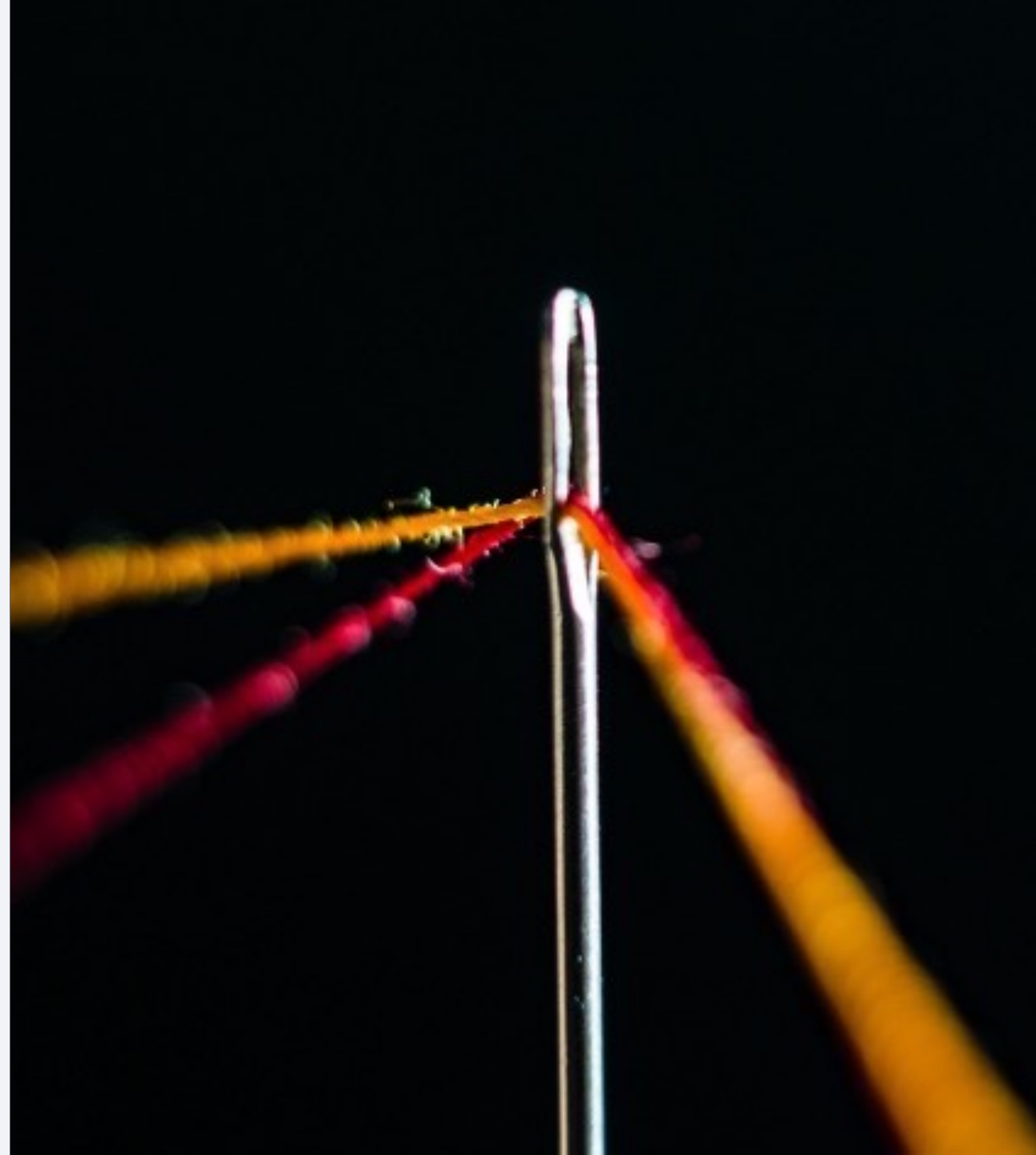


 Buyer

 Supplier

# MARKETPLACE CRITERIA

- No substances on the REACH Candidate list
- No substances on the SIN List
- No substances with CMR properties
- No substances fulfilling the PBT/vPvB or PMT/vPvM criteria
- No EDCs







# WHAT IS AN ALTERNATIVE?

Marketplace welcomes:

- Drop-in substitutes
- Technological solutions
- New processes and materials

Identification of functionality important!



# ALTERNATIVES

- Description of function and use
- Replacement info
- Third party verification and standards
- Contact supplier directly

## Mesamoll® - non-phthalate plasticizer

**EVALUATED ALTERNATIVE** *What is an alternative/evaluated alternative?*

### Summary

Mesamoll® is a general purpose plasticizer, with good gelling behaviour and saponification resistance, which is compatible with many types of polymers including poly vinyl chloride and polyurethanes.

### Description

Mesamoll® is a general purpose plasticizer, with good gelling behaviour and saponification resistance, which is compatible with many types of polymers including poly vinyl chloride and polyurethanes.

It is characterised by

- outstanding gelling capacity with a large number of polymers including PVC and polyurethanes, resulting in lower processing temperatures and shorter processing times
- high saponification resistance, especially beneficial for articles which come into contact with water and alkalis.
- good compatibility with a large number of polymers such as polyurethane (PU), polyvinyl chloride (PVC), natural rubber (NR), styrene-butadiene rubber (SBR), blends of styrene-butadiene rubber and butadiene rubber (SBR/BR), isobutylene-isoprene rubber (IIR), acrylonitrile-butadiene rubber (NBR) and chloroprene rubber (CR)
- outstanding resistance to weathering and light
- good dielectric properties which give plasticised PVC outstanding weldability at high frequencies leading to shorter cycle times than with other plasticisers

### Possible replacement to

Plasticizers, e.g. DINP, DOTP, DIDP

# LANXESS

Energiz

### Supplier

LANXESS Deutsch  
GmbH

» [Visit website](#)

» [View more from this s](#)

### Contact

Teresa Bernheim

[Contact Sup](#)

### Technical Function

» [Plasticizer](#)

### Sector of Use

» [Manufacture of plastic](#)  
including compounding

» [Manufacture of rubber](#)

» [Manufacture of textile](#)

### Material Article Catego

» [Fabrics, textiles and a](#)

» [Other](#)

» [Plastic articles](#)

» [Rubber articles](#)

### Documents:

[Mesamoll.pdf](#)

[Mesamoll\\_SDS\\_US\\_E](#)

[Comment or report this](#)





# MARKETPLACE USERS

- 690 alternatives
- 50 000 visitors over 2023
- Most visitors from
  - USA
  - China
  - Germany
  - India
  - UK
- 8,000 pageviews on ads per month
- 2 contacts made per day

# POPULAR ALTERNATIVES

- DWR – durable water repellence
- Textile solutions
  - Dyes
  - Finishing
- Leather related alternatives
- Biobased solutions





# MARKETPLACE & PFAS

- Special section for alternatives to PFAS
- Around 100 alternatives today
- Focus during 2024
- Important focus
  - Health & environmental crisis
  - Legislative pressure

## Future-proof your business

### Find safer alternatives to hazardous chemicals

Marketplace gathers all green chemistry innovations in one place, making it easier for companies to choose safer solutions. Search advertisements of safer alternatives and connect with suppliers.

[Read more >](#)

[How it works](#)

[Find alternatives](#)

[Add alternative](#)

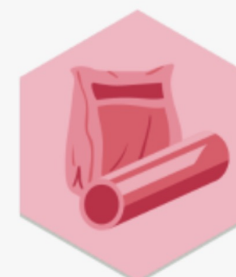
[Submit request](#)

[Terms](#)

Explore Safer Alternatives



PFAS



Construction



Electronic

# PFAS - ALTERNATIVES ON MARKETPLACE

Alternatives – major uses

- Durable water repellency (DWR)
- Fire fighting foams (FFF)
- Food contact materials (FCM)

More are welcome!







**UNDERSTANDING IF, WHERE  
AND WHY YOU HAVE PFAS IS A  
CHALLENGE TO COMPANIES**

# PFAS GUIDE

Aims to support companies in understanding

- if
- where
- why

PFAS is used in their organisation

--> facilitating the first step in PFAS phase-outs





# INFORMATION PART

- Typical PFAS uses, supply chain communication and chemical analysis
- Substitution as a phase-out method. Find, evaluate and compare alternatives
- What are the problems with PFAS? PFAS and human health
- Regulation in the EU and the US
- Links to sector-specific reports



## Investigate

This chapter will teach you about typical “red flags” indicating that PFAS could be in a product. You will also find suggestions on how to communicate about PFAS in the supply chain and what to do if you do not get the answers you need from your suppliers, or want to verify them.



## Phase out

To phase out PFAS you need to find a way to achieve the same functionality without them. The most straightforward approach is to simply replace one chemical with a safer one. But this can be tricky. Other ways include changing materials, technologies or production processes.



## Concern

PFAS continue to be used on a broad scale despite their adverse health effects, linking them to issues such as cancers and infertility. Since these “forever chemicals” do not degrade, they are now found all over the planet in our environment and in the blood of every single human being.



## Regulation

It has taken some time, but regulation is now finally stepping up to address this vast and problematic family of chemicals. A comprehensive PFAS ban is expected in the European Union within the coming years and a range of regulatory actions are in the pipeline in other regions as well.



## Sector

Many industries use PFAS in some way or another for a variety of functions and purposes. These uses can be hard to find at a first glance. In this part of the guide, we publish reports with information on PFAS use and substitution with relevance for specific industry sectors.

# Are there PFAS chemicals in your product?

**Sector** ?  **Use / Product** ?

**Material**  **Function**

[Search](#) [Clear all filters](#)

## Possible PFAS hotspots

Based on your selection

### Use

- Professional apparel
- Textile finishing - dyeing with sulphur dyes
- Curtains and blinds
- (Sailing) boat equipment - textiles for maritime applications
- Golf gloves
- Non-woven acoustic insulation textiles
- Consumer apparel and accessories - breathable membranes
- Technical textiles
- Outdoor technical textiles - canvas, awnings, tarps, tents, sails, rope etc
- Personal protection equipment
- Carpets and rugs
- Home textiles
- Textile finishing - dyeing and bleaching
- Carpet and upholstery cleaner
- Impregnation spray for textiles
- Textile finishing
- Textile finishing - fibre finishes
- Footwear
- Textile-based coverings - tablecloths, beddings etc
- Textile finishing - dye transfer

### Read more

30 results

[Download Excel](#) [Share link](#) [Remember search](#)

Sector	Use/Product	Function	Material
> Textile, apparel and upholstery	Professional apparel	Water and oil repellence	Textile
> Textile, apparel and upholstery	Textile finishing - dyeing with sulphur dyes	Anti-foaming agent	Textile
> Textile, apparel and upholstery	Curtains and blinds	Water and oil repellence	Textile
> Textile, apparel and upholstery	(Sailing) boat equipment - textiles for maritime applications	Water and oil repellence	Textile

# DATABASE PART

- Incorporates information from scientific publications, reports and information from individual companies
- Links to the SIN List and Marketplace
- Links to reports on alternatives
- Let it be a growing source of information!
- [pfasguide@chemsec.org](mailto:pfasguide@chemsec.org)





# Are there PFAS chemicals in your product?

**Sector** ?

Select sector



**Use / Product** ?

Select use / product



**Material**

Select material



**Function**

Select function

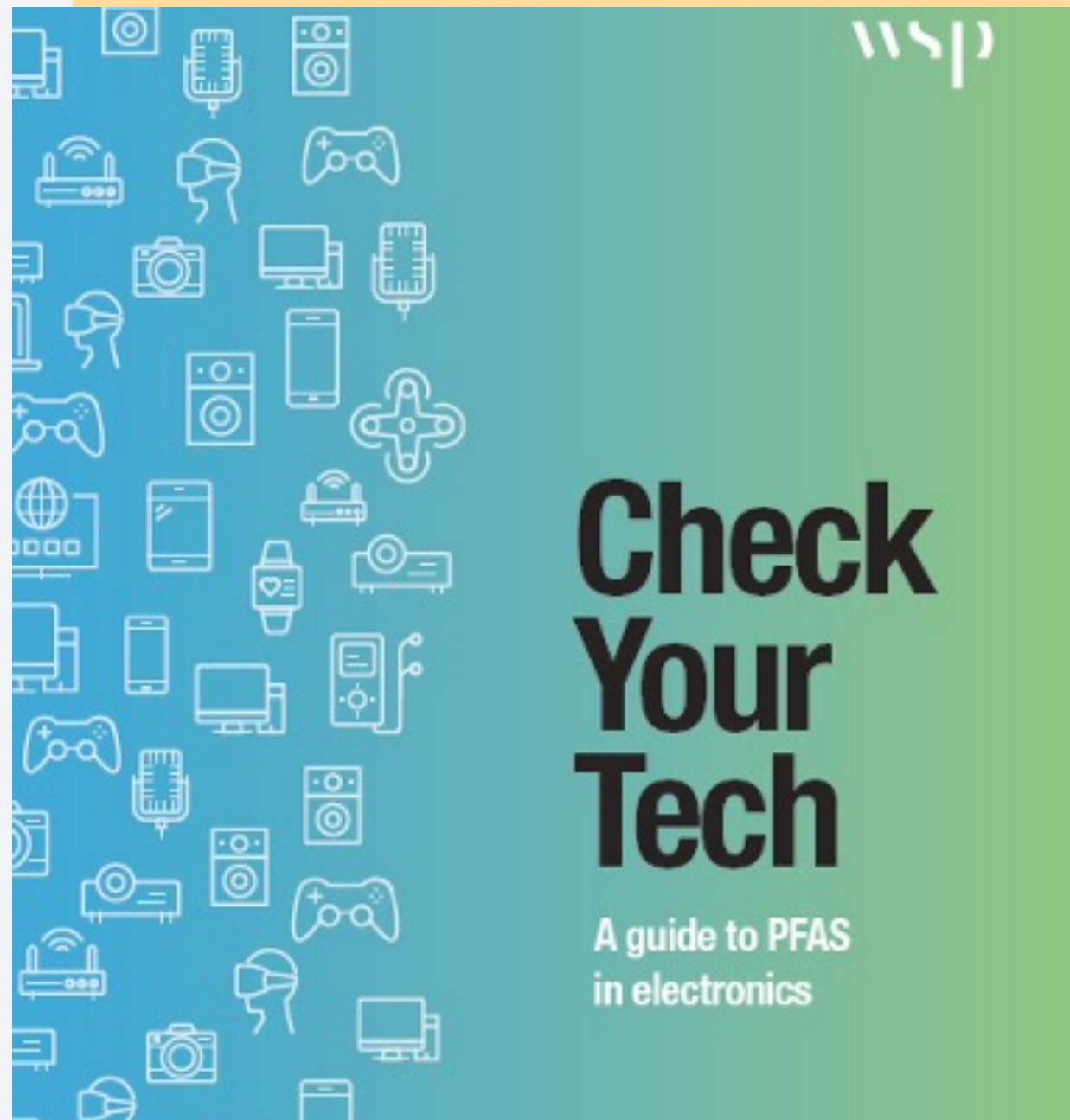


## DIRECTED SEARCH

- Find potential PFAS uses and functions in relevant sectors and products
- Information on related CAS-numbers and alternatives provided for the search results

# CHECK YOUR TECH

- Desktop research and expert interviews
- Investigates the use of PFAS in electronics around three themes: electronic devices, the manufacturing process and semiconductors
- Summarize 77 identified uses, functions and potential alternatives
- Used by e.g. HP in supply chain communication
- PDF report + excel sheet
- And info of course also included in the PFAS Guide database



# PFAS GUIDE USERS

- 23,000 users during 2023 (launched in Feb)
- Most common countries
  - Germany
  - USA
  - Sweden
  - Italy
  - France
- Living database – more information needed!





# ChemSec TOOLS FOR PFAS PHASEOUT

1

 chemsec  
**PFASGUIDE**

If, where and why you have PFAS in your products

2

 chemsec  
**SIN LIST**

The PFAS chemicals most likely found in products

3

 chemsec  
**MARKETPLACE**

The safer alternatives

# TIME FOR Q&A!



# IMPORTANT LINKS

- Website: [chemsec.org](https://chemsec.org)
- The SIN list: [sinlist.chemsec.org](https://sinlist.chemsec.org)
- ChemSec Marketplace: [marketplace.chemsec.org](https://marketplace.chemsec.org)
- PFAS guide: [pfas.chemsec.org](https://pfas.chemsec.org)
- ChemSec webinars: [youtube](#)
- Newsletter: [Sign-up page](#)
- LinkedIn: [ChemSec](#)







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