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
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

Apple

Boots

adidas

EurEau

LEGO

ShawContract

Dell

H&M Group

IKEA

SONY

SKANSKA

Coop

Kingfisher
IIHC
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.
• 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
2008 Launch

2011 Endocrine Disrupting Chemicals (EDC)

2014 EDCs Persistent Bioaccumulative and Toxic (PBT/vPvB)

2019 PBTs, Persistent Mobile and Toxic (PMT and vPvM) Carbon Nanotubes

2023 PFAS
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
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
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.
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

Search tips

Search results

SIN LIST
416 substances

Most common uses:
Others (807)  Paints & pigments (473)  Plastics & rubber (412)

MARKETPLACE
61 alternatives

Go to Marketplace

PFAS (416)  Toxic metals and metalloids (269)

SIN group

Petroleum (240)  Nitrogen compounds (152)
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
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

Summary
Mesamoll® is a general purpose plasticizer, with good gelling behaviour and saponification resistance, which is compatible with many types of polymers including polyvinyl 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 polyvinyl 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 (IR), 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 plasticizers.

Possible replacement to
Plasticizers, e.g. DNP, DOTP, DIDP
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
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 ways 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.
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
Are there PFAS chemicals in your product?

- 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. **PFAS GUIDE**
   If, where and why you have PFAS in your products

2. **SIN LIST**
   The PFAS chemicals most likely found in products

3. **MARKETPLACE**
   The safer alternatives
TIME FOR Q&A!
IMPORTANT LINKS

- Website: chemsec.org
- The SIN list: sinlist.chemsec.org
- ChemSec Marketplace: marketplace.chemsec.org
- PFAS guide: pfas.chemsec.org
- ChemSec webinars: youtube
- Newsletter: Sign-up page
- LinkedIn: ChemSec