

Working with the Textile Guide

ChemSec's Textile Guide is a tool that walks you through the process of chemicals management from a textile industry perspective. Users learn to identify the relevant problematic chemicals and find ideas on how to phase them out. You do not need to be a chemical expert to be able to use the Textile Guide but rather any person in any textile company in the whole textile supply chain should be able to use the information and get started. The following fictional cases from two different actors in the supply chain give you a feel of the tool and how to use it. Note that this tool can be useful for companies in other sectors as well.

Case 1 – The Dye House

First we have a dye house whose main customers have adopted the Zero Discharge of Hazardous Chemicals (ZDHC) "Manufacturing Restricted Substances List (mRSL).

The most important consideration for the dye house is to make sure it can comply with the ZDHC mRSL requirements. As a first step, we can move directly into the Textile Guide Database. On the main page of the database, we have a drop-down menu called "Filter the Textile Guide". Click the drop-down menu and go to the filter option called "Lists". Here, you will find another drop down-menu where you can choose the different lists included in the database. Depending on what you are interested in, you are able to filter the database. If other restricted substance lists would apply to your situation, you can add them as well. Remember the dye house was interested in the ZDHC mRSL so let's select that. Then click the button "filter". This will give you a list of 225 substances. This is a rather big list and you will need to communicate it to your chemical suppliers to make sure their formulations are safe to use in their processes.

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TEXTILE GUIDE FIND EVALUATE ACT ABOUT

EVALUATE YOUR TEXTILE CHEMICALS

Search for chemicals to see if you have any **hazardous ones** in your supply chain. Add them to your Working List to take further action.

CAS Number or Chemical name

FILTER your SEARCH RESULTS ▲

Lists: Hazard Groups: Functional Groups:

Number of results:

225 results for filters "ZDHC" in the Textile guide.

CAS/EC Number	Name	Functional/Hazard Groups	ADD ALL
CAS 45298-90-4	Perfluoroalkylsulfonates (PFAS)	Perfluorocarbons (PFCs) Perfluorocarboxylic acid and salts (PFCA) Perfluoroether sulfonate (PFES) and related sub-	ADD

If you are only interested in specific dyes and pigments, you could choose to filter for such substances as well. Go to the filter “Functional groups” and tick the box “Dyes and Pigments” and it will give you 58 results instead. Note that auxiliary chemicals such as solvents, even if they are used in dyeing formulations are not included in this example.

EVALUATE YOUR TEXTILE CHEMICALS

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The screenshot shows the search interface with the following elements:

- Search bar: "CAS Number or Chemical name" with a "SEARCH" button.
- Filter section: "FILTER your SEARCH RESULTS" with dropdowns for "Lists" (set to "ZDHC") and "Hazard Groups".
- Functional Groups section: A list of categories with checkboxes, where "Dyes and pigments" is checked.
- Number of results: A dropdown set to "25".
- Summary: "58 results for filters 'ZDHC, Dyes and pigments' in the Textile guide."
- Table of results:

CAS/EC Number Name	Functional/Hazard Groups	ADD ALL
CAS 632-99-5 (4-(4-aminophenyl)(4-iminocyclohexa-2,5-dienylidene)methyl)-2-methylaniline hydrochloride	Allergizing disperse dyes Dyes and pigments	ADD INFO
CAS 569-64-2 (4,4'-[4,4'-diaminodiphenyl]...	Dyes and pigments H361 Suspected of damage...	ADD
- Buttons: "FILTER" and "RESET FILTERS".
- Bottom right: "ADD chemicals to your working list."

So now the Dye house wants to have more information on each chemical. By clicking the “Info” button as seen on each chemical they can see exactly which of the lists include a specific substance and which companies have restricted a particular substance.

For now we remove this filter and return to the 225 substances we want to communicate to our suppliers.

We click the button “Add all” to move all 225 substances to our working list. If you want to share this list with your suppliers you should press “Save” in the top, this will allow you to choose a name for your list, let’s call this one “Dye house List” As soon as you have done this, the database will create a unique randomized URL as seen in the top of the window.

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<p>CAS 50-32-8 benzo[de]f]chrysene</p>	<p>Polyaromatic hydrocarbons (PAHs) H317: May cause allergic skin reaction H340 May cause genetic defects H350 May cause cancer H360 May damage the unborn child or fertility H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long-lasting effects</p>	<p>ADD</p>
		<p>CLOSE</p>
<p>List Categories</p> <p>Company & textile sector lists</p> <p>EU regulatory lists</p> <p>US regulatory lists</p> <p>NGO Lists</p>	<p>Lists</p> <ul style="list-style-type: none"> AAFA AFIRM Bluesign EU Ecolabel Good Environmental Choice Ecolabel GOTS H&M Nordic Ecolabel Oeko-Tex VF group ZDHC <p>EU restriction WFD</p> <p>US California Candidate List US California Prop 65 US EPA TRI</p> <p>SIN List</p> <p>This substance is recognised as hazardous by the following lists and categories.</p> <p style="text-align: right;">View all</p>	

The “Save” icon is now replaced by a “Share” icon instead. You click it, and it will open your email-client inserting your unique URL. You are now ready to share it with customers, suppliers or colleagues. Once they click on your link, they will see exactly what you see on the screen. You also have the option to print it or export your working list to an Excel file.

SEARCH

FILTER your SEARCH RESULTS ▾

Lists

ZDHC ▾

Hazard Groups

▾

Functional Groups

▾

FILTER RESET FILTERS

Number of results

25 ▾

225 results for filters "ZDHC" in the Textile guide.

SAVE
 PRINT
 EXPORT

CAS/EC Number Name	Functional/Hazard Groups <small>ADD ALL</small>	CAS/EC Number Name	Functional/Hazard Groups <small>CLEAR ALL</small>
CAS 45298-90-6	Perfluoroalkylsulfonates (PFAS) Perfluorocarbons (PFCs) Perfluorocarboxylic acid and salts (PFCA) Perfluorooctane sulfonate (PFOS) and related substances	CAS 45298-90-6	Perfluoroalkylsulfonates (PFAS) Perfluorocarbons (PFCs) Perfluorocarboxylic acid and salts (PFCA) Perfluorooctane sulfonate (PFOS) and related substances
CAS 56-24-6	Tri-substituted organotin compounds	CAS 56-24-6	Tri-substituted organotin compounds
CAS 27193-28-8 (1,1,3,3-tetramethylbutyl)phenol	Aromatic compounds Nonylphenols, Octylphenols and their Etoxilates (NP, OP, NPE, OPEO) Octylphenols (OP) Surfactants	CAS 27193-28-8 (1,1,3,3-tetramethylbutyl)phenol	Aromatic compounds Nonylphenols, Octylphenols and their Etoxilates (NP, OP, NPE, OPEO) Octylphenols (OP) Surfactants
CAS 632-99-5 (4-(4-aminophenyl)(4-minocyclohexa-2,5-dienyl)dimethyl-2-methylaniline hydrochloride	Allergizing disperse dyes Dyes and pigments	CAS 632-99-5 (4-(4-aminophenyl)(4-minocyclohexa-2,5-dienyl)dimethyl-2-methylaniline hydrochloride	Allergizing disperse dyes Dyes and pigments
CAS 24124-25-2 (Z,Z)-tributyl(octadeca-9,12-diene)ovostannane	Organic tin compounds Tributyltin compounds Tri-substituted organotin	CAS 24124-25-2 (Z,Z)-tributyl(octadeca-9,12-diene)ovostannane	Organic tin compounds Tributyltin compounds Tri-substituted organotin

Case 2 – Small European brand

The next fictional company is a small European brand that wants to become eco-label certified.

Being a small brand it is sometimes difficult to keep track of everything in the business, especially with regard to chemicals. This company is very concerned with toxic chemicals and is therefore interested in becoming eco-labelled and doesn't really know where to start. The best starting point for this company is to get a better understanding of the textile manufacturing process by going to the website "Find/Know your textile processes". It will explain which chemicals are of particular concern in each of the production steps, from fibre to fashion.

The screenshot shows the website interface for chemsec TEXTILE GUIDE. At the top, there is a navigation menu with 'FIND', 'EVALUATE', 'ACT', and 'ABOUT'. A 'Subscribe to our mailing list' form is also present. A dropdown menu is open, highlighting 'KNOW YOUR TEXTILE PROCESSES'. The main content area features the title 'The textile process' and a descriptive paragraph: 'Chemicals are present in all parts of textile manufacture. This part will walk you through the production steps - from fibre to finished garment - and give you an idea of the kind of chemicals that are used.' Below the text is a circular diagram illustrating the textile production process, from fibre to finished garment, with chemical symbols and icons. A 'Step 1' indicator is visible at the bottom left of the content area.

There are a number of substance groups which are particularly problematic. Those are highlighted in the "find" menu in the top navigation under "Textiles come with a toxic footprint". Knowing which kind of substance groups to avoid such as water repellents and plasticizers could influence already at the design stage how a garment should look and feel like.

The screenshot shows the website's header with the chemsec logo and 'TEXTILE GUIDE' title. A navigation menu includes 'FIND', 'EVALUATE', 'ACT', and 'ABOUT'. A 'Subscribe to our mailing list' form is present with an 'email address' input and a 'Subscribe' button. A dropdown menu is open under 'FIND', listing: 'HOW TO FIND CHEMICALS', 'TEXTILES COME WITH A TOXIC FOOTPRINT' (highlighted), 'KNOW YOUR TEXTILE PROCESSES', 'ASK AROUND', and 'CONTACT YOUR SUPPLIERS'. The main content area features a large blue banner with the text 'Textiles come with a toxic footprint' and a sub-headline: 'You don't have to be a chemical expert, but it's a good idea to familiarise yourself with some of the most common chemical groups used in textiles.' Below this, a paragraph states: 'There are hazardous chemicals that are used more frequently than others in the textile manufacturing process. Here are the most commonly used hazardous chemicals, where and why they are used and what problems they may cause.' Two columns are visible: 'Solvents' and 'Surfactants'. A large orange 'Search chemicals' button is located at the bottom right.

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HOW TO FIND CHEMICALS
TEXTILES COME WITH A TOXIC FOOTPRINT
 KNOW YOUR TEXTILE PROCESSES
 ASK AROUND
 CONTACT YOUR SUPPLIERS

Textiles come with a toxic footprint

You don't have to be a chemical expert, but it's a good idea to familiarise yourself with some of the most common chemical groups used in textiles.

There are hazardous chemicals that are used more frequently than others in the textile manufacturing process. Here are the most commonly used hazardous chemicals, where and why they are used and what problems they may cause.

Solvents

A solvent is usually a liquid that is used to dissolve substances or materials, such as pigments, in a solution, the dye. Solvents are used in several

Surfactants

Surfactants may act as detergents, wetting agents, emulsifiers, foaming agents or dispersants, and are used in many stages of the textile process.

Search chemicals

The next step is to visit the “Evaluate/Find” menu and find the hot spots in your product portfolio. In this section we elaborate why you should focus your efforts on certain chemicals, one at a time. A small company might have difficulties doing everything at once. Here you get recommendations on what to consider both in-house as well as external requirements such as flag ship products, sensitive consumer groups, regulation and so on.

The screenshot shows the website interface. At the top left is the chemsec logo and 'TEXTILE GUIDE'. The navigation menu includes 'FIND', 'EVALUATE', 'ACT', and 'ABOUT'. On the right, there is a 'Subscribe to our mailing list' form with an 'email address' input field and a 'Subscribe' button. A dropdown menu is open under 'EVALUATE', listing: 'HOW TO EVALUATE CHEMICALS', 'SEARCH THE CHEMICAL DATABASE', 'ABOUT THE EVALUATION TOOL', and 'FIND THE HOT SPOTS IN YOUR PRODUCT PORTFOLIO'. The main content area has a blue background with the heading 'Find the hot spots in your product portfolio' and the text 'You will need to prioritize your problematic chemicals. Deal with the worst offenders first.' Below this, a paragraph states: 'Chances are high that you will find out that you have several chemicals that are problematic. It may not be possible, however, to get rid of them at once. Instead you should aim to phase them out over time.' A prominent orange button labeled 'Search chemicals' is located at the bottom right of the content area.

If this small brand wants to become Eco-labelled, they must be sure that their suppliers can actually deliver. Even if the brand does not have chemical expertise, they can easily go to the database and filter for the desired eco-label scheme and share it with the suppliers in the same way the dye house did in the previous example.

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Control and audit is crucial to make sure what you have ordered is actually up to your desired standards. Here you should visit the “Act/Control and Audit” section which gives advice on how to improve the control over your goods. The section covers anything from asking for certificates to full-fledged testing procedures and on-site auditing - all depending on ambition, resources and company priorities.

The screenshot shows the ChemSec Textile Guide website. At the top, there is a navigation bar with the ChemSec logo, the text 'TEXTILE GUIDE', and menu items: FIND, EVALUATE, ACT, and ABOUT. To the right of the navigation bar is a subscription form titled 'Subscribe to our mailing list' with an input field for 'email address' and a 'Subscribe' button. Below the navigation bar is a large blue banner with the heading 'Control and audit' and a sub-heading 'When you know what chemicals you want to avoid and your suppliers are informed, you need to make sure they actually follow your requirements.' To the right of the banner is a vertical list of menu items: HOW TO ACT AND SUBSTITUTE CHEMICALS, CREATE YOUR CHEMICAL INVENTORY, SUBSTITUTE HAZARDOUS CHEMICALS, ALTERNATIVE CHEMICALS YOU CAN USE, SUCCESSFUL CHEMICAL SUBSTITUTION STORIES, and CONTROL AND AUDIT (which is highlighted with a blue background and a mouse cursor). Below the banner is a section with the text 'On-site visits, chemical tests and quality certificates are means of making sure your supply chain follows your standards.' To the left of this text is a photograph of a person's hands operating a sewing machine. To the right of the text is a large orange button labeled 'Search chemicals' and a smaller blue button labeled 'Find'.

Related links

ChemSec website
chemsec.org

ChemSec Textile Guide
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Zero Discharge of Hazardous Chemicals (ZDHC)
www.roadmaptozero.com