

INDUSTRY REPORT 2024

Endocrine disruptors and carcinogens in building materials



What is the trend?

Contents

From the CEO	03
This is Byggvarubedömningen	04
Statistics	07
The Byggvarubedömningen interview	12
Customer survey	15
Questions to the public	18
Interview with the Swedish Centre for Chemical Substitution	22
Summary & Outlook	24

“Acknowledgment that what we are doing is important”

From Day One, Byggvarubedömningen’s raison d’être has been to contribute to better construction. Better and easier construction for contractors, but perhaps above all better and healthier properties. Quite simply, to create the least toxic environments in which to spend time as possible, for example in homes, schools or workplaces.

In 2016, we undertook a major overhaul of our criteria regarding the assessment of building materials. Partly because we ourselves has acquired greater knowledge of more toxic substances, and partly because there was increasing interest from our customers and members in toxic substances linked to the construction process.

Enough time has now passed since the criteria were changed to enable us to analyse the results from the period 2017–2022 – and it makes for a very uplifting read.

In this report, we have taken a closer look at endocrine disruptors and carcinogens in building materials, and how the use of materials containing these substances has changed over the five years for which we have produced data. The figures speak for themselves: in 2022, the use of building materials containing endocrine disruptors and carcinogens was just half the level seen in 2017. A result of which I am very proud as part of Byggvarubedömningen, but also a result that provides an even stronger impetus to keep on contributing to changing the industry for the better together with our customers and members.

In this report, you will be able to read more about the results from the data that our logbooks have collected in recent years, and acquire a deeper understanding of the importance of non-toxic construction.

This is a report that highlights genuine change and represents an acknowledgment that what we are doing is important, and that our influence is moving things in the right direction. I would like to take this opportunity to offer my personal thanks to all of you clients who, by setting high standards in your projects, help to fill in your logbooks and make conscious, non-toxic material choices.

Thank you!

Hannes Morger, CEO
Byggvarubedömningen



“The figures speak for themselves: In 2022, the use of building materials containing endocrine disruptors and carcinogens was just half the level seen in 2017.”

This is Byggvarubedömningen

Byggvarubedömningen is a non-profit economic association that assesses and provides information about building materials assessed for sustainability. Our vision is to encourage the development of a non-toxic, healthy built environment that assumes its responsibility for both current and future generations.

Our history goes back to the turn of the millennium, when the industry was experiencing major challenges, health risks and expensive remediation work linked to PCBs and asbestos. Because despite a high level of awareness of the problems, there was in general a low level of knowledge about the issue. The industry needed more knowledge about non-toxic and sustainable construction, and Byggvarubedömningen was born.

Byggvarubedömningen was formed by merging the two associations Milab and ByggdMiljö. This saw Sweden's biggest and most important property owners launching a standard for the environmental assessment of building materials.

Those involved drew up assessment criteria against which products were to be assessed, and created a database that would enable all assessments to be gathered in one single place. *Since Day One, the entire basic premise of Byggvarubedömningen has been to make it easier for actors in the construction industry to make sustainable, non-toxic material choices.* Quite simply, to make complex information easily

understandable and accessible to Sweden's contractors and property companies.

Our assessments

All the products we assess are presented in our online service. They are presented there in three levels: **Recommended** (green), **Accepted** (yellow) and **To be avoided** (red). This means that even those who are not familiar with these complex areas can make smart, sustainable material choices. Our logbook tool is the place where users collate products and goods, where actors can collaborate on material choices and log what has been used in each specific construction project. All the data entered into the logbooks will make it possible in future to trace substances of which we currently have little knowledge and that may prove to have harmful properties. A way for us and our users to assume responsibility for both current and future generations.

Byggvarubedömningen is constantly growing, and is developing the construction and property industry to become more sustainable. The number of members, assessments and logbooks is increasing continuously, and together we are making it easier to build sustainably!

Our assessment symbols



Recommended



Accepted



To be avoided



THE 4 PILLARS

How Byggvarubedömningen works - step by step

Assessment



The material supplier submits the documentation we need based on our criteria for chemical content and life cycle aspects. It is also voluntary to assess products according to our social criteria for Sustainable Supply Chains.

Database



The products are published and searchable in our database, in which it is clearly visible what assessment the product has received in terms of chemical content, life cycle aspects and overall assessment. Everything is presented in our pedagogical three-step model: Recommended (green), Accepted (yellow) and To be avoided (red). The user can search the database by product name, material supplier, content of a certain substance, to avoid certain substances or classifications, and by products that comply with a given certification.

Logbook



Logbook In the logbook, users list their construction projects and which building products are used in each project; this can involve both renovations and new production projects. The logbook is a tool that allows the user to examine the products used during construction based on the client's list of requirements.

Traceability



In addition to complying with building certification standards such as the Miljöbyggnad/Green Building Certification programme, BREEAM or the Nordic Swan Ecolabel, the purpose of the logbook is to know what has been used in the buildings - and where. This is partly to be able to recycle products and materials correctly in connection with renovation or demolition, and partly to identify any regulation of substances that will come in the future.

Since mid-2016, we have been performing assessments in accordance with new assessment criteria. We have now compiled our data for the years 2017–2022 linked to endocrine disruptors and carcinogens in building materials. In this report, we present what we have been able to discern from the information we have gathered.

We go further than legislation requires

EU legislation contains some regulations for hazardous substances in materials. One problem is that materials are not classified in the same way as chemical products. This makes it difficult for anyone who is not familiar with the subject to determine which products actually are non-toxic. To make it possible to achieve even, comparable assessments for all building products, both chemical products and materials, we therefore assess them all in the same way.

Our members want to go further than legislation requires when it comes to toxic substances in building products. And we want to make it easy for them to identify those products in a simpler way – no one should have to be an expert to know which products are non-toxic.

The regulations under which we assess building materials

Our criteria for chemical content are based on the Swedish Chemicals Agency's PRIO criteria for hazardous properties, which have been around since 2004, with a revision in 2020. PRIO is a tool that helps companies find and replace hazardous substances in their goods or chemical products. The criteria are divided into phase-out criteria for substances with serious properties that need to be phased out, and prioritised risk reduction criteria for hazardous properties that should be risk-assessed if they have to be used. PRIO has a database of substances that satisfy the properties, and PRIO is aimed at all industries, not just the construction industry.

The concentration limits in Byggvarubedömningen's criteria are based on the EU's CLP Regulation, which regulates the classification and labelling of chemicals, and REACH, which regulates the registration, evaluation, authorisation and restriction of chemicals.

Our members

Our membership currently consists of 76 companies and organisations, ranging from architectural firms to municipalities, regions, property-owning and property-managing companies, government agencies, contractors, actors in the civil engineering industry, and more. All share the same ambition: to contribute to a more sustainable construction and property industry, and with a commitment to influence the work of Byggvarubedömningen.



More logbooks - fewer toxic substances

Toxic substances in construction processes have become an increasingly high-priority issue in Sweden during the 21st century. This, combined with new legislation, led us to undertake a major overhaul of our assessment criteria in 2016. We have now been able to summarise the behavioural changes that have taken place around the use of building products containing endocrine disruptors and carcinogens during the period 2017–2022. We present the results here. →





When Byggsvarubedömningen set out on the task of producing statistics on the use of endocrine disruptors and carcinogens, we did not know what to expect. The number of logbooks had skyrocketed, with an increase of 57% – which we suspected might also mean that more products containing toxic substances had been used. The number of substances identified as endocrine disruptors has also increased since 2017, which could contribute to increased use. But the result was the exact opposite, as we could see that the use of products that had received the Byggsvarubedömningen assessment *To be avoided** had decreased by no less than 51% during the period 2017–2022. A pleasing result that shows not only that the industry is taking the issue seriously, but also that we as an organisation are doing an important job and performing an important function to continue reducing toxic substances in Swedish construction projects.

The selection of properties in the report

The reason we chose to focus on these two properties is because they are the ones that most people have heard about, but may not have a full grasp of what they mean in practice. At the same time, these are properties that affect many people in society, and something of which many of us have a direct or indirect experience. So, what exactly are endocrine disruptors and carcinogens, and what can they cause?

*For a product to receive the assessment *To be avoided* when it comes to endocrine disruptors and carcinogens, it must contain 0.1% or more of a classified substance.

Endocrine disruptors

Endocrine disruptors can, for example, mimic or interfere with the hormones in our body. Often the effects are not discovered until a few years later, and have an impact not only today, but also in the next generation or even the one after that. For example, when a pregnant woman is exposed to these substances, it can affect the stem cells in the foetus, thus affecting the woman's children or even grandchildren in the future.

These substances are present in many places around us, and we are particularly sensitive to exposure in the foetal stage. Research has shown that this can result in a delay in male sexual development or feminise development in boys, depending on the type of endocrine disruptors to which the foetus has been exposed. There are also suspicions that the substances can cause premature puberty in girls, and that there is a correlation with obesity, ADHD and genital abnormalities.

Carcinogens

As the name suggests, these substances can cause cancer if someone is exposed to them, often over a long period of time. Most of us have someone close to us who has been affected, and know the problems that a cancer diagnosis entails. And it is in this area that we have a good chance to work together, to contribute to fewer people having to be affected by the disease in the future, by making the right decisions today.

In this study, we have focused on substances that are carcinogenic in category 1 of Swedish chemicals legislation. This means: "Known or presumed human carcinogens".

It is based on animal studies or epidemiological studies. Epidemiological studies entail linking to effects on humans at the population level. For example, people getting cancer after having worked in a factory that handles a certain substance, or people getting cancer after an accident. The link to cancer can be found in all kinds of organs, from lungs to skin or bones.



**Read on to see trends
from our logbooks >>**

Trend 2017–2022

Here you can see trends from Bygghälsöversynens logbooks from the years 2017–2022. The starting year is 2017, because we introduced new criteria in mid-2016.

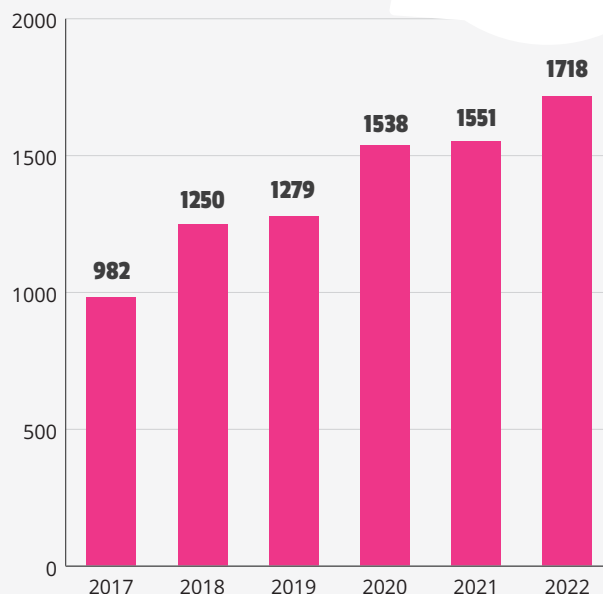
The reason why we have not included 2023 in the statistics is that a lot of the logbooks that were created that year have not yet been completed.

Number of logbooks started per year, 2017–2022.

The number of logbooks increased by

75%

from 2017 to 2022.

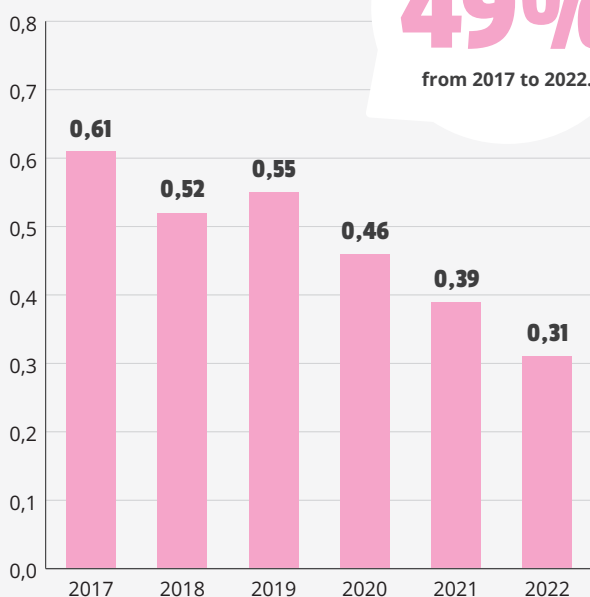


The average number of products assessed as “To be avoided due to endocrine-disrupting properties” per logbook, based on the year in which the logbook was started.

Decreased by

49%

from 2017 to 2022.

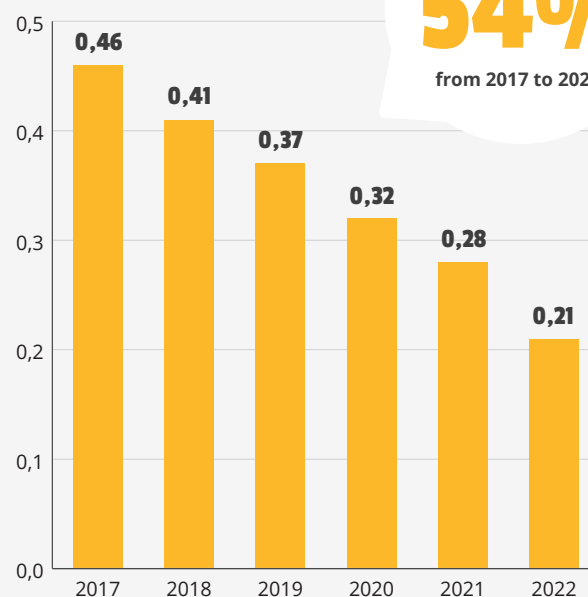


The average number of products assessed as “To be avoided due to carcinogenicity” per logbook, based on the year in which the logbook was started.

Decreased by

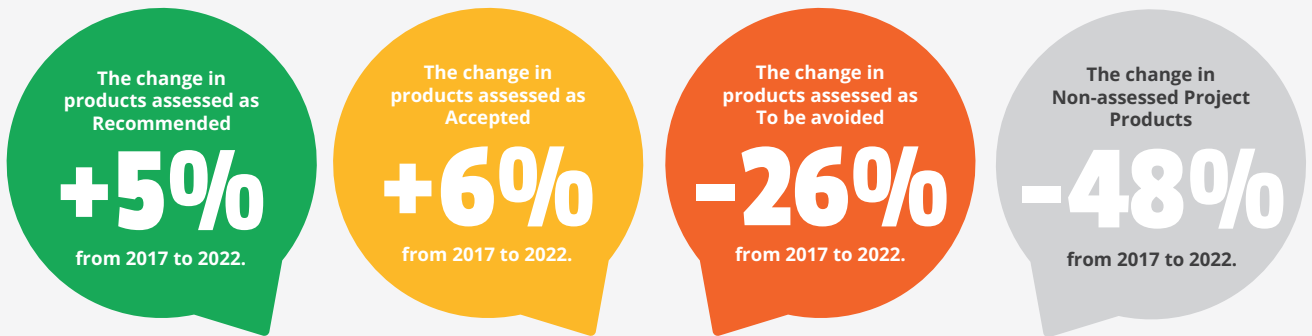
54%

from 2017 to 2022.

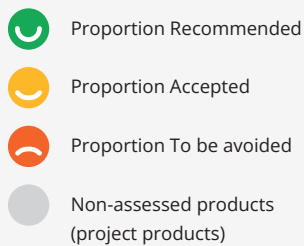


Logbooks - facts and trend, 2017-2022

- An average logbook contains **about 100 products**. A logbook for a totally new building generally contains far more products than a tenant adaptation, which refers to existing premises that are renovated.
- We can see that the number of logbooks started per year increased from about 980 in 2017 to about 1,700 in 2022. In total, Byggarubedömningen currently has **more than 11,000 active logbooks**, which can then be archived and saved when they have been completed.
- The conclusion we can draw from this is that the number of logbooks has almost doubled, while **the use of products containing the toxic substances investigated has halved**. A clear, gratifying acknowledgement that Byggarubedömningen is a popular system that continues to grow.



The assessment levels of all products, presented as a percentage, in all logbooks starting in years in the period 2017-2022.



“We in the construction sector have a great responsibility”

With **increasing demands from clients for non-toxic building materials**, work began on the hypothesis that the use of endocrine disruptors and carcinogens has decreased in recent years. And using the data contained in logbooks, Byggarubedömningen was able to put its theory to the test.

At a time when we are becoming increasingly aware of the environment, health and climate, there is a great deal of activity in this area in terms of both national and European legislation. The legislative changes taking place mean that Byggarubedömningen needs to keep up to date with new criteria linked to toxins in building materials, so that it can perform correct assessments for its customers and members. For three years now, **Marianne Balck** has been working as an environmental toxicologist at Byggarubedömningen. A role that largely involves research, development and monitoring the external environment.

“We have criteria for chemical content and life cycle aspects, and new legislation means that we must constantly be on our toes, to make sure that our assessments and recommendations are in line with the new, updated requirements,” she says. As mentioned, the criteria for these kinds of toxic substances and their properties are being updated continuously.

But a major update was made to the criteria in 2016, and this has been used as a foundation since then. This meant that Byggarubedömningen had the opportunity to study the figures between 2017 and 2022, and draw conclusions from what was contained in the logbooks.

“Since we had an optimistic hypothesis, and we knew that the answer was in our own systems, we decided to find out whether the trend really is heading in the direction we thought. And the results exceeded

our expectations, as the use of endocrine disruptors and carcinogens decreased by more than 50% during this period,” says Marianne Balck.

Why did you focus specifically on endocrine disruptors and carcinogens in this report?

“Cancer is so widespread that most of us have someone close to us who has been affected. It’s perhaps one of the most common and serious health problems we face today. When it comes to endocrine disruptors, research tells us that they are harmful to everyone, but primarily to children in the foetal stage, which meant that we also wanted to highlight this issue. We can help drive a reduction in the spread PAGE 13 of toxic material, and it feels important to communicate that information both to our industry and to the general public.”

“We can minimise the toxins, and that’s what drives us,” says Marianne Balck, environmental toxicologist at Byggarubedömningen.



What problems can endocrine disruptors cause?

“They affect both humans and animals, and as I said, the foetus in the womb is most sensitive to exposure to these substances. It is suspected that they can cause premature puberty in girls and poorer sperm quality in men. And this applies not only to the first generation exposed to these substances, but it can also cause the same problems for the next generation and the one after that.”

How dangerous are these substances?

“It’s difficult to give a direct answer, as different substances present different levels of danger, and the degree of exposure to them will differ. But many of the substances can be dangerous even when there is only a little exposure, and it’s difficult to say exactly what the effect will be when we’re exposed to many

MARIANNE BALCK OFFERS TIPS:

How to get started when specifying requirements for building products

Consider material choices throughout the process

Work with requirements and follow-up throughout the chain – in procurement, in design and planning, and in production. Products used by architects and contractors also need to be assessed. There need to be procedures describing how this is to be done, and who is responsible for what.

Avoid expensive and toxic risks

Using products when you don’t know what they contain is a major risk. It might, for example, result in major, expensive remediation measures if it subsequently emerges that the products contained toxic substances. Make sure to use assessed products directly where you are sure of their content and life cycle impact. Also share information about environment-friendly alternative products for different functions, so that all projects can make sustainable material choices.

Put the issue on the agenda for the whole company

It’s important to have information initiatives throughout the organisation. Everyone who works in different ways with projects or purchasing needs to understand why you specify requirements and how it affects their role.

Mistakes can happen!

Don’t be discouraged if things don’t quite work out in the beginning. You can learn from your mistakes, evaluate them and follow up. The most important thing is to get started and fine-tune your processes as you go along. It can feel daunting to put resources into areas you haven’t previously considered, but when it becomes a natural part of everyday work, everyone involved will benefit.

Don’t be afraid to ask!

Seek help and inspiration from people such as contractors you know or have worked with before, who are already working with requirement specifications when it comes to building products. You can often pick up tips from others in the industry. Inspiration for specifying requirements is also available on the Swedish National Agency for Public Procurement website.

substances from different sources, when studies are normally conducted on one substance at a time.”

Recycling is a trend in the construction industry, is recycling always a good thing?

“The concept of recycling is a good one, but there are pitfalls that are worth bearing in mind. Let’s say that a construction project aims to recycle five products from buildings that are to be demolished or renovated; in that case it’s important to try to choose items that are traceable. In newer buildings, there’s often a log-book where you can easily check out the contents of the different products. But it’s more difficult if it’s an older building. In that case, one tip is to focus on recycling product groups that have a low risk of containing hazardous substances. There are also actors who sell products for recycling, who conduct and have conducted various checks.”

Why is it important that we specify requirements for our building products?

“We humans have the greatest impact on the environment and nature. Which means we’re the ones who must assume responsibility for managing the earth for future generations, and this makes the environmental requirements in the construction industry especially important, as we use large amounts of natural resources. Every material choice is extremely important, and the more of us who choose non-toxic

materials, the greater the difference we can make together.

“There’s also the environmental goal of A non-toxic environment in Sweden, which aims to protect people, animals and biodiversity by such means as reducing the use and spread of hazardous substances. In this respect, we in the construction sector have a responsibility to assume, and Byggvarubedömningen’s tools are a good way to acquire knowledge, control and the opportunity to comply with the requirements speci-

fied. Both to protect those who will be living or working in and around the properties being built, and for those working on the projects.”

Is totally non-toxic construction possible?

“Right now, it’s probably impossible to complete an entire construction project that’s 100% non-toxic. But we can minimise the toxins, and that’s what drives us. There is strong consumer influence in all areas, and we can see this increase in knowledge

driving this trend in the right direction. In Sweden, we’re a pioneering country, but we can still be better, and that’s a constant driving force. We’re also working on an EU project right now, NonHazCity 3, which aims to inspire the countries around the Baltic Sea to start specifying and following up on material requirements in the construction sector in a similar way as we’re doing in Sweden.”

”In newer buildings, there’s often a logbook where you can easily check out the contents of the different products. But it’s more difficult if it’s an older building.”

Comprehensive log-books make it easier to trace toxic substances and determine which products are suitable for recycling in new construction or renovation.



Survey - what our members think

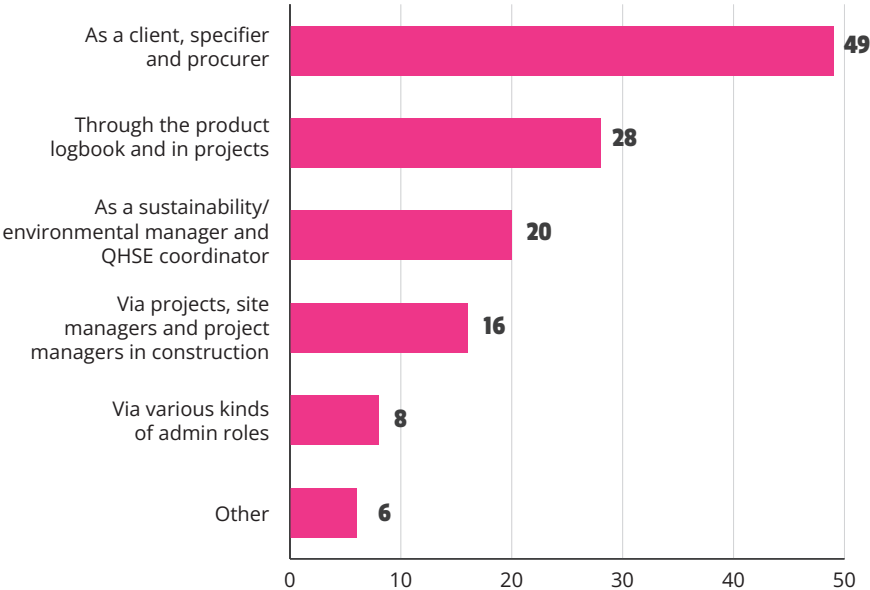
To further understand the results of this report, we turned to our members, who are the ones using Byggvarubedömningen's tools. Here we see, in black and white, that our work and our services are making it easier to make conscious material choices. We also get a clear picture of the challenges facing construction companies, and see confirmation that they are largely in line with ours. On the following pages, you can see exactly what respondents to our questions thought. It was a questionnaire with free responses, and an answer could contain several things/opinions.

QUESTION 1

How do you come into contact with Byggvarubedömningen in your professional role?

Total (n=87)

Summary of who comes into contact with Byggvarubedömningen in which roles. Stated in number of free responses.

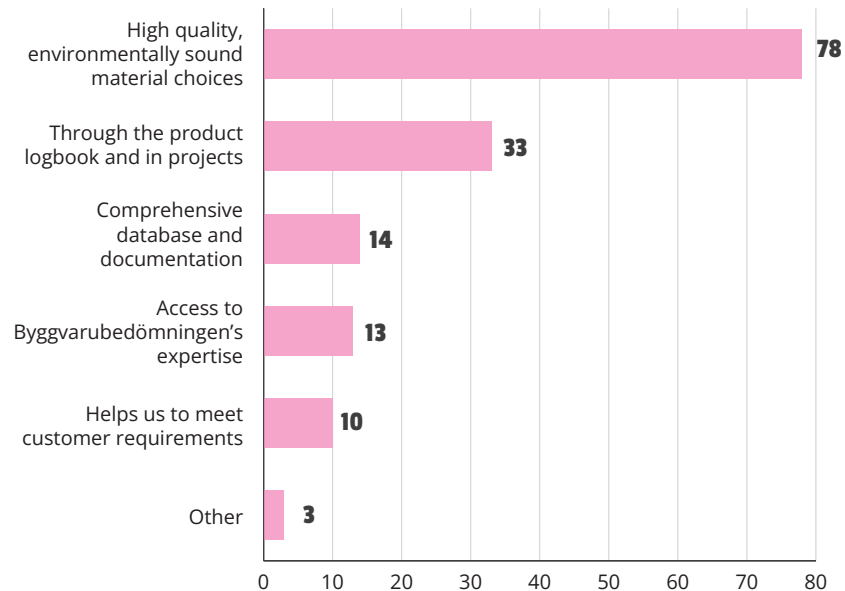


QUESTION 2

In what way does Byggvarubedömningen make it easier for you to make sustainable material choices?

Total (n=87)

The reasons why users turn to us are primarily due to a good overview, the clarity of the system and the fact that this makes it easier for them to make sustainable material choices.

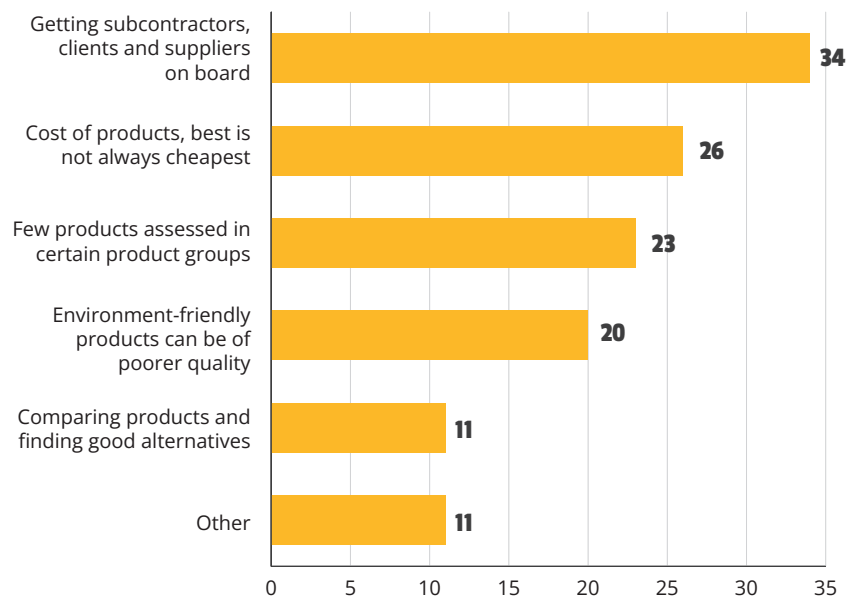


QUESTION 3

What are the biggest challenges faced by your company when it comes to continuing to make sustainable material choices?

Total (n=87)

The biggest challenges in being able to make sustainable material choices are the difficulty in getting other actors on board and the fact that it is expensive. Stated in number of free responses.

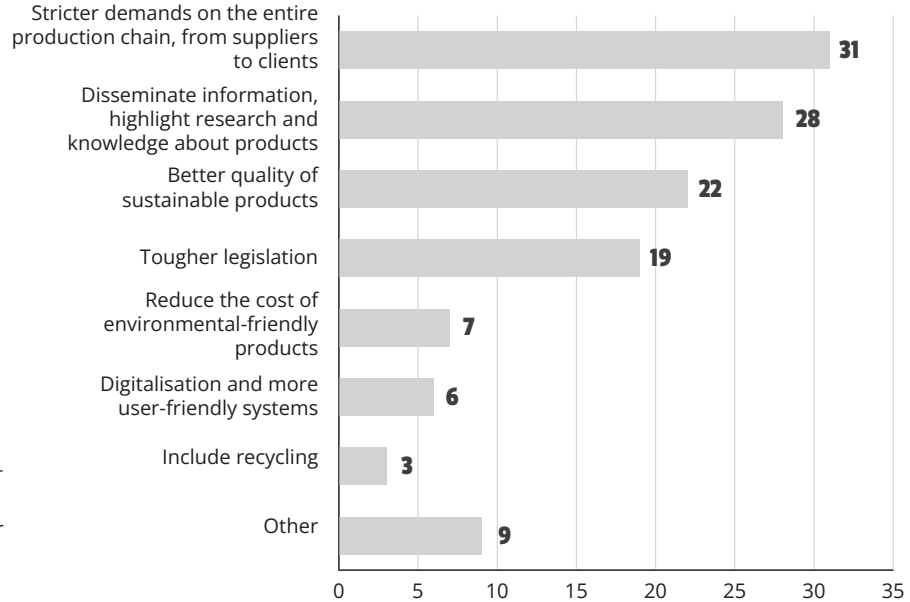


QUESTION 4

In this year's report, we focus on the phasing out of hazardous substances. How do you see the trend in sustainable material choices in five years' time, what will it take for us to phase out hazardous substances even more?

Total (n=87)

We wondered what our users think is required for us to be able to phase out hazardous substances even more in the future. It is clear in this regard that many believe that the entire production chain has to be on board – from supplier to client. Greater knowledge, better quality of products and tougher, common legislation at a European and ideally a global level are also required. Stated in number of free responses.



Summary and comments by members

Byggarubedömningen's work is clearly appreciated and must continue. But we do see a desire to include more aspects concerning the recycling and reuse of materials, and for more products to be assessed.

“Sustainable material choices today encompass many more criteria than chemical content. The biggest challenges are reduced climate impact and the lack of effective tools for responsibility in the supply chain.”

Maria Qvillberg, Sustainability Manager
New Production, HSB

“I think the next five years will see major developments. I feel that suppliers are trying to assume their responsibility and be innovative. We need to be proactive and continue to disseminate information and knowledge.”

Suzan Jelveh, Environmental Consultant, Ebab

“Working in the field of recycling, I find this is an important component part of the renovation projects of the future.”

Pernilla Morris, Specifier, City of Stockholm

“Knowledge is required of equivalent alternatives with the same function and less hazardous substances.”

Pernilla Morris, Specifier,
City of Stockholm

“Byggarubedömningen's database supports all parties involved in a project in enabling quick, correct decisions when choosing environmentally assessed products.”

Birgitta Lindell, Specifier,
Stockholm Vatten och Avfall



Survey

What does the public say?

While working on the report, we became curious about knowledge of endocrine disruptors and carcinogens among people in general. To find out about this, we enlisted the help of the research company Norstat to get a better picture of what the public thinks about this issue.

We were soon able to confirm that knowledge of both endocrine disruptors and carcinogens in construction products is low across Sweden. About half of those who took part in the survey had no knowledge of the risks. Especially when it came to endocrine disruptors.

There was also no great concern about being exposed to these kinds of substances in their home: only one in ten participants expressed concern. This shows what a huge responsibility we have, as the average person does not give these issues much thought.

The lack of concern can be explained by a lack of knowledge of the subject – that people simply do not know that toxic substances pose a risk. Those who did feel concern did so for their own and their family's well-being, but also in a wider perspective linked to the environment, the future and the long-term impact.

Despite the low level of concern, we noticed that these issues are still something that the participants would pay more attention to in the future after having studied the information. For example, when renovating or moving to a newly built property.

The following pages present the responses from the survey of what people generally know about, and feel about, endocrine disruptors and carcinogens in building products.

The survey in brief

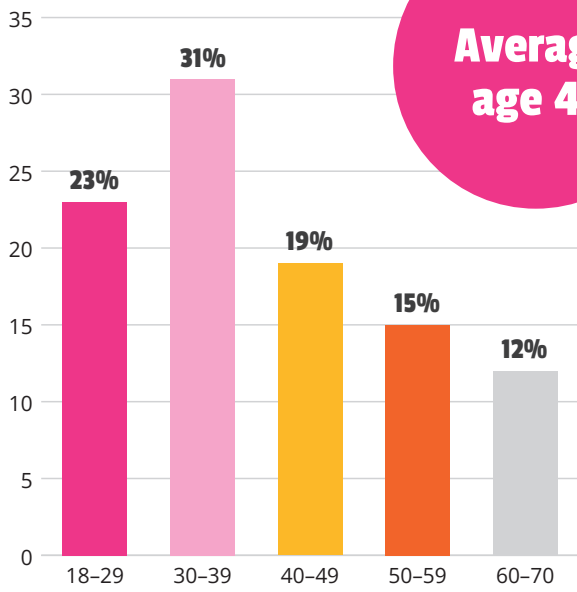
Conducted by: Norstat (Norstat Express)

Type of survey: Digital, quantitative survey

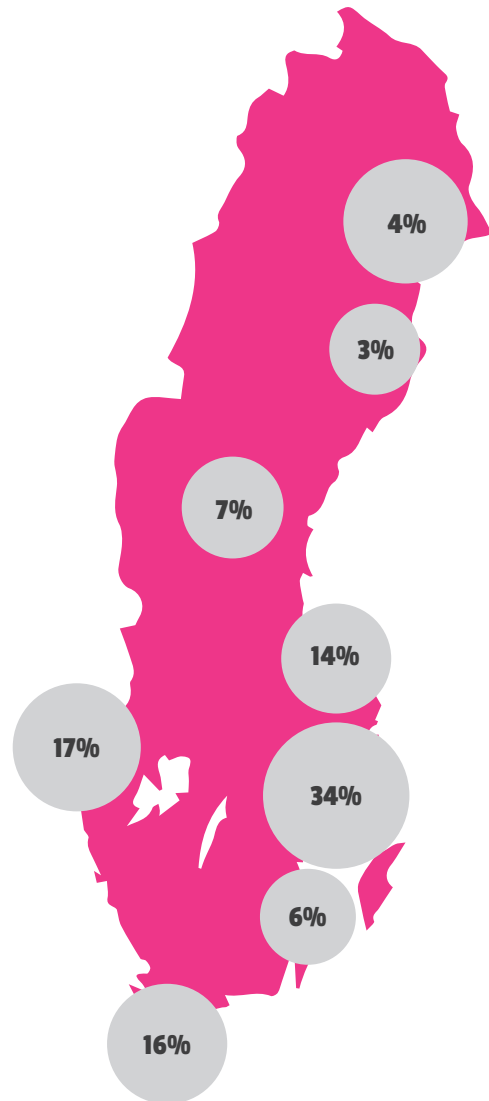
Form of questions: Predefined alternative responses and one question that required a free text response

Number of participants: 500 respondents

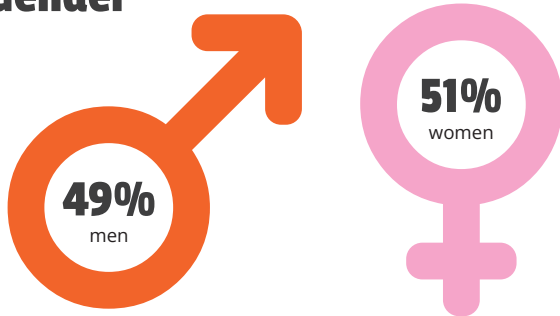
Age



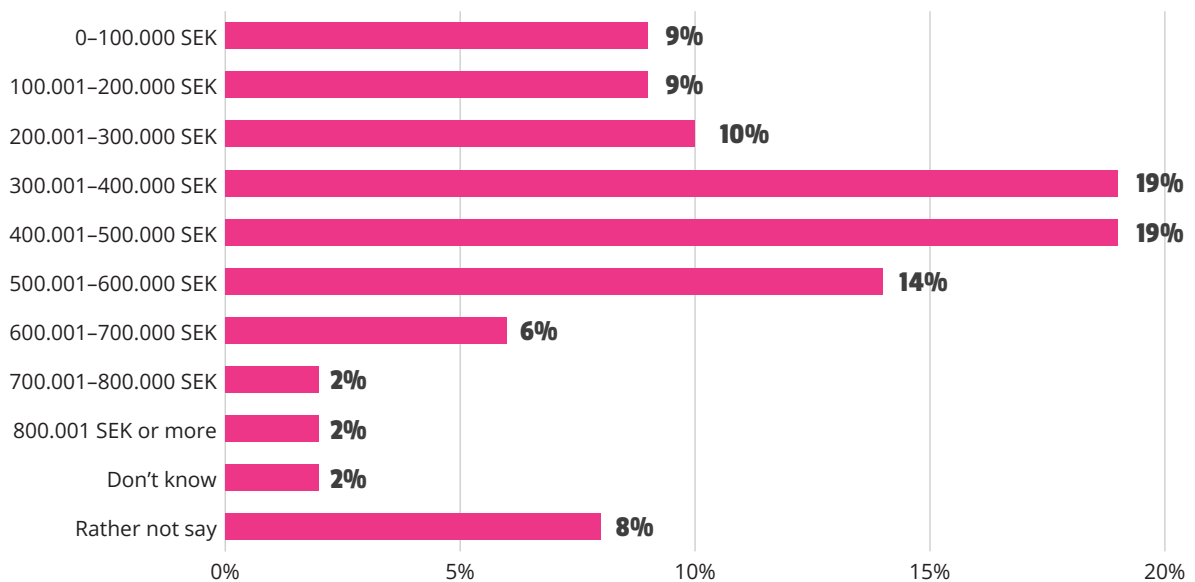
Geographical distribution



Gender



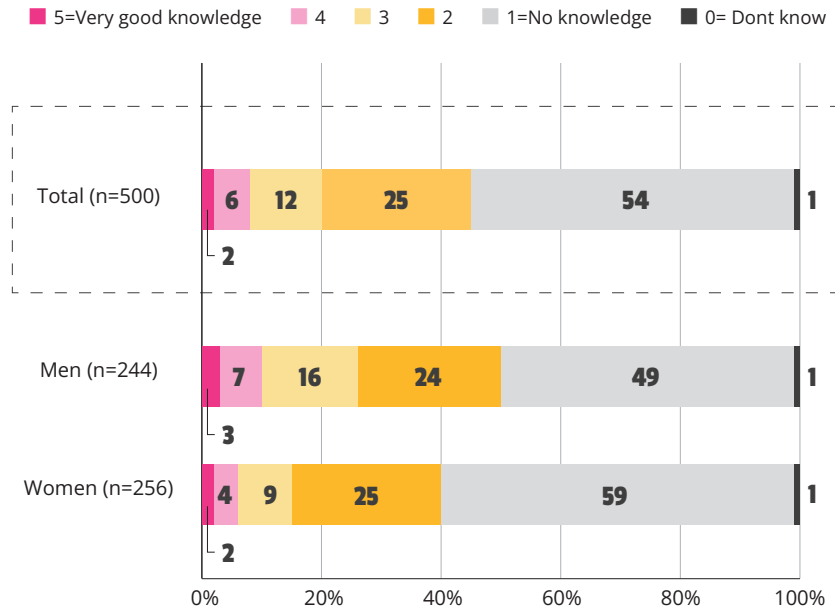
Personal annual income



QUESTION 1

How much knowledge do you have of endocrine disruptors in building products?

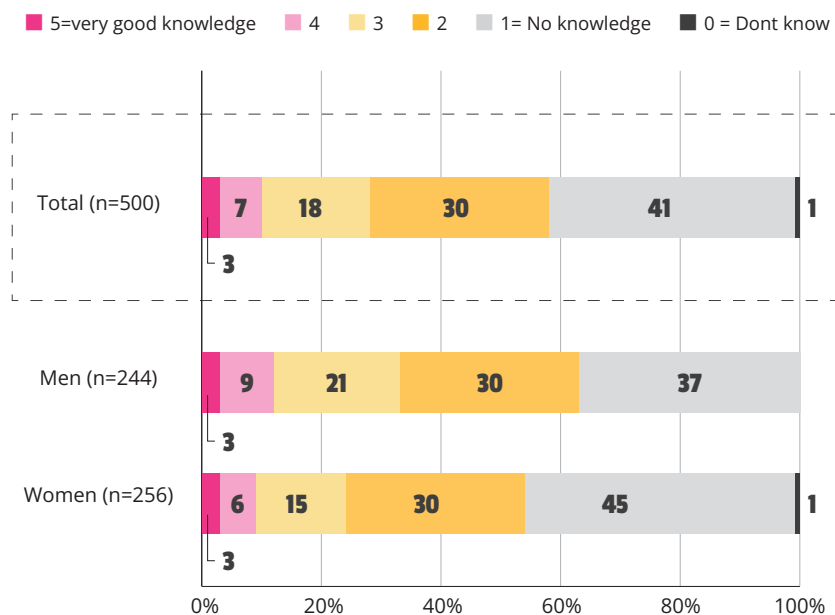
It is evident that the public has a low level of knowledge of endocrine disruptors in building products. **Almost 80% of respondents had no or very little knowledge of the subject.**



QUESTION 2

How much knowledge do you have of carcinogens in building products?

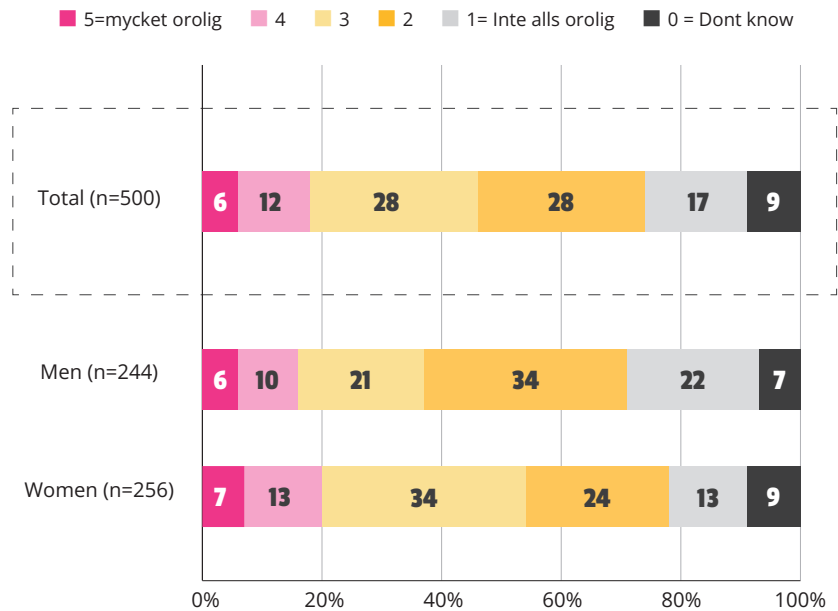
There is also a low level of knowledge when it comes to carcinogens in building products. **40% of respondents state that they have no knowledge at all.** We can, however, see that there seems to be a slightly higher level of knowledge than was the case with endocrine disruptors.



QUESTION 3

How concerned are you about being exposed to endocrine disruptors and carcinogens from building products?

We can see here that people are not particularly concerned about being exposed to endocrine disruptors and carcinogens from building products. **Just under half state that they are not particularly concerned.** There is not, however, a pattern to suggest that those who consider themselves to have a higher level of knowledge about both endocrine disruptors and carcinogens in building products are also more concerned.




“I don’t know enough to be able to be concerned.”

Woman, aged 28,
West Sweden



“I assume that no hazardous material is sold.”

Man, aged 49,
Stockholm



“It’s hard to be concerned about it as I have no knowledge of it. Now that the issue has been raised, of course you think more about it.”

Women, aged 32,
Småland



“I’m concerned about the consequences for the future.”

Male, aged 29,
South Sweden

The Swedish Centre for Chemical Substitution makes Sweden unique in the EU

It may sound like a simple matter to “just” switch to better, non-toxic alternatives. But with cross-border trade and different legislative systems, things can easily become very complex. This is where the government-funded initiative the Swedish Centre for Chemical Substitution comes into the picture – an organisation that guides companies and the public sector in issues relating to hazardous chemicals, and how they can find better alternatives.



The Swedish Centre for Chemical Substitution was founded in 2018 as a government initiative to speed up work on substitution in Sweden. This has been done by taking a closer look at how to increase knowledge of hazardous chemicals in materials and how more companies can be encouraged to work on replacing hazardous substances in different materials.

“This initiative makes us fairly unique in the EU. You can find consulting companies in other EU countries that work according to similar models, but so far we’re the only government-funded actor. But it’s an issue that’s also being discussed at EU level,” says **Anna Strid**, adviser at the Swedish Centre for Chemical Substitution.

Anna Strid and her colleagues at the Swedish Centre for Chemical Substitution are focused on small and medium-sized enterprises in all industries. In simple terms, Anna Strid believes that the organisation can be described as an actor that aims to lower thresholds and make it easier for both companies and the public sector to get started with their work on substitution.

“We’re all beginners at the outset, and this is a difficult subject if you’ve not worked with these issues before. That’s why we offer training courses and guides to help people get started. It’s difficult for us to answer questions about a specific substitution of functional chemicals, when people are asking for a ready-made alternative. This is because the companies themselves have the unique technical and commercial knowledge needed to implement a substitution. We’re more of an aid to self-help: we offer knowledge, we guide companies and help them to make the right contacts,” says Anna Strid.

What form does the work process take when a substance with hazardous properties is identified in a product?

“It’s a major undertaking that requires a lot of time and resources. The Swedish Chemicals Agency has developed a substitution ladder, which provides a clear description of the process. We used this as a basis for our Substitution Guide, which provides tips and suggestions for tools and resources you can use for each step of the ladder.”

What are the biggest challenges when working with these issues?

“We hold free basic courses for businesses that want to work more with substitution, where we usually ask precisely that: *What are your biggest challenges?* And the responses we tend to get are usually the same.

That there’s a lack of knowledge, that legislation is difficult to interpret, what requirements need to be met, that it’s difficult to get information about content



Anna Strid, adviser at the Swedish Centre for Chemical Substitution.

from suppliers and that there's often a lack of resources to work with substitution. These are recurring challenges we hear from the companies we meet, and something that has helped us identify the areas where we can provide the most assistance."

Although substitution is usually good, there is a pitfall to try and avoid - unhealthy substitution. But what does that mean?

"Unhealthy substitution is if you replace a substance with something that turns out to be just as bad or worse than the substance you removed. In practice, this means that you've not achieved anything and that resources were spent on changes that will have to be made again. To avoid unhealthy substitution, you need knowledge of both the substance you want to replace and the alternative you want to replace it with. Using the Substitution Guide will give you tips on how you can best avoid unhealthy substitution," says Anna Strid.

In your experience, how does the construction industry compare to other industries?

"The construction industry is one of those industries that's made a little bit more progress when it comes to awareness of hazardous chemicals and obtaining information about content. And that's something that I think is largely due to the work that's being undertaken within the assessment systems. It also shows how important it is and the impact it has when manufacturers and suppliers are required by their customers to demand products that are as far as possible free of hazardous chemicals."

This is the Swedish Centre for Chemical Substitution

The Swedish Centre for Chemical Substitution guides companies, organisations and the public sector in work to identify hazardous chemicals and find better alternatives, in everything from products to processes.

The Swedish Centre for Chemical Substitution gathers and disseminates the knowledge that exists in the field of chemical substitution, including in the form of guidance, support material and training courses.

Does your company want to get started with its work on substitution?

Send an email to substitutionscentrum@ri.se for help/information on how your particular company can phase out hazardous chemicals.

Finally, what changes have you seen from the creation of the Swedish Centre for Chemical Substitution, back in 2018, until today?

"We see a continued need for support in these issues, and that there's still a large proportion of companies that aren't working with these issues. This is why we're engaging in outreach activities. With increased demands from both legislation and customers, we feel that the need for support will continue to increase. For example, the construction industry is increasingly moving towards recycling, so it's important to have non-toxic material streams. If we build non-toxic from the outset, we'll have much better opportunities for material reuse and recycling in the future."

HOW THE SUBSTITUTION GUIDE WORKS

The Substitution Guide offers support for companies that want to get started with their phasing out of hazardous chemicals. The guide is based on the Swedish Chemicals Agency's substitution ladder, and is not aimed at one specific industry. The Substitution Guide is a means of support that enables your company to choose the resources and tools that feel relevant to you.

THE FIVE STEPS IN THE SUBSTITUTION GUIDE

Step 1: Gather information	Step 2: Identify hazardous substances	Step 3: Look for alternatives	Step 4: Select alternative	Step 5: Develop new alternatives
-----------------------------------	--	--------------------------------------	-----------------------------------	---

For more information about the different steps, follow this link: www.ri.se/sv/substitutionscentrum/substitutionsguiden

Summary

Sweden is just the first step

The report speaks for itself: our members want to push the boundaries of legislation forward. And it is precisely our members and other specifiers in the industry who can make a genuine difference. By increasing demand for non-toxic products, we can influence legislation in the right direction and inspire other EU Member States – and in the next step, the rest of the world – to learn from us in Sweden.



Although there are EU rules regarding the classification of chemical products, materials – such as building products – are not covered by them. To make it possible to achieve even, comparable assessments for all building products – not just chemical products – we therefore assess them all in the same way. And we believe and hope that EU legislation will go in the same direction. In this respect we have an important role to play, as an organisation and as a pioneering country, in showing that it is entirely possible to reverse the trend when it comes to toxins in building products. As indicated by the results in this report.

Our tool is nothing without our users

If clients continue to specify requirements for the chemical content of building products – which our report shows that our members do – toxic substances can be phased out even more than we have already done. At the same time, it is reasonable to believe that

certain substances that we would theoretically want to phase out must continue to be present in some products.

But the hope is that the future development of alternative substances and products will enable us to replace these as well.

As more substances will be classified in the future as endocrine disruptors according to new classifications in CLP (the EU's chemicals legislation for classification, packaging and labelling), it may be that there will be an increase in the number of products containing endocrine disruptors during a transitional period, but if we maintain a strong focus, this number will hopefully decrease once more.

Next step: influence material suppliers

It is evident that actors among contractors and clients put a high value on non-toxic materials. The next challenge is to encourage even more material suppliers to start working with substitution. This is a major challenge, as product development is a time- and resource-intensive job, which may be one of the reasons why work on substitution has not been a priority for all suppliers. There are also other kinds of requirements that place a heavy burden on product development. But this is where, once more, the power of common requirements from the industry comes into the picture. If we demand change together, the ability to offer non-toxic alternatives will be a natural competitive advantage.

Another major challenge is that we in Sweden are relatively isolated in working with these issues. This makes it difficult to motivate international companies that are not bound by the same requirements and culture around non-toxic construction. On a global level, PAGE 25 Sweden is a small market, and getting more countries on board is therefore an important step in the right direction. In this context, the EU and its legislative structures represent perhaps the biggest and most important factor in making progress.





To contribute to this, Byggarubedömningen is involved in the EU project NonHazCity 3 to inspire and communicate knowledge on the issue. The project focuses on the issue of chemicals, circularity and climate in the construction industry and runs from 2023–2025, and the participants are primarily actors from countries around the Baltic region. At present, there is some EU legislation in the area of chemicals that is being developed and improved continuously.

There is a lot happening that should be able to motivate more countries. Partly through ESPR (Ecodesign for Sustainable Products Regulation), which sets out requirements for content from a life cycle perspective. ESPR will also make it mandatory for products to have a digital product passport, which essentially means that products and their contents will be easy to trace, creating an incentive for suppliers to avoid toxic substances.

Rules on climate declarations for buildings are also under way at EU level, something on which we in Sweden are already working. Based on the EU's long-term chemicals strategy, there will also be improvements to existing legislation, while new laws will be added to close the legal loopholes that currently exist.

We have come a long way, but need to go even further

We can see that the way we work with these requirements in Sweden is influencing the EU, both through EU projects such as NonHazCity 3 and via input to new EU legislation. And it is our hope that the EU can influence the rest of the world in the same way in the next step. The EU is a strong force internationally, with the potential to exert influence on a global scale. We have come a long way and influenced the Swedish market, while also noting that the first signs of movement in our neighbouring countries and Europe in general.

Non-toxic construction is not a Swedish issue, it is an issue of global health and sustainability that cannot be underestimated. And the journey towards a non-toxic construction industry on a global scale continues.

The criteria that guide our work

We have based our criteria for chemical content on the Swedish Chemicals Agency's PRIO criteria for hazardous properties. In simple terms, this is a tool that helps companies find and replace hazardous substances in their products. We have then broken down the PRIO criteria to create our own criteria and set content limits for *Recommended* (green), *Accepted* (yellow) and *To be avoided* (red) based on the EU's CLP legislation. Read more about the Swedish Chemicals Agency's PRIO criteria in the separate fact box.



In addition to the PRIO criteria, Byggarubedömningen's criteria are based on two pieces of EU chemicals legislation:

- CLP, which regulates the classification, labelling and packaging of chemical substances and products.
- REACH, which regulates the registration, evaluation, authorisation and restriction of chemical substances.



The Swedish Chemicals Agency's PRIO criteria

The Swedish Chemicals Agency's PRIO criteria were developed in 2004 and have since been revised and updated in 2020. The criteria are divided into two parts:

- Phase-out criteria for substances with serious properties that need to be phased out.
- Prioritised risk reduction criteria for hazardous properties that should be risk-assessed if they are to be used.
- PRIO has a database containing examples of substances that satisfy these properties, and they are aimed at all industries, not just the construction industry.

In this report, we see how the use of endocrine disruptors and carcinogens in building materials has developed in recent years. The report is based on Byggvarubedömningen's statistics for the years 2017–2022.

Byggvarubedömningen's vision is to contribute to the development of non-toxic and sustainable construction for both current and future generations.

Contact us

info@byggvarubedomningen.se

byggvarubedomningen.se

