

What's hiding in your textile products?

sustainable chemistry

5 substances of concern widely used in textiles

Problematic chemicals keep showing up in textile products, posing risks to human health and the environment, leading to potential challenges for your business.

Understanding what's in your products is the first step towards chemical transparency; helping you to create safer, more sustainable products that your customers trust.



Per- and Polyfluoroalkyl Substances (PFAS)

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| Widely used to | Make fabrics water-, stain-, and oil-repellent |
| Commonly found in | Waterproof coatings, stain-resistant treatments, outdoor apparel and upholstery |
| Concerns | PFAS are known as "forever chemicals" because they don't break down in the environment. Exposure to these substances is linked to cancer, immune system impacts, and developmental harm |
| Regulatory and market trends | PFAS is increasingly restricted globally, for example: <ul style="list-style-type: none"> • EU REACH - limited or phased out entirely; • US - state-level bans expanding; and • major brands moving towards PFAS-free products |
| Why the need for chemical transparency? | Knowing where PFAS are in your products is critical to ensuring compliance with different jurisdictions and variances in requirements. Some regulations also require historical knowledge of PFAS. |



Phthalates

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| Widely used to | Make plastics soft and flexible |
| Commonly found in | Screen-printed logos, synthetic leathers and coated fabrics |
| Concerns | Linked to reproductive and developmental toxicity, with a particular concern for children's exposure |
| Regulatory and market trends | Restricted in toys and children's products via the US Consumer Product Safety Improvement Act (CPSIA) and EU REACH, with growing brand bans across all product categories |
| Why the need for chemical transparency? | Phthalates are often used in surface treatments rather than directly in fabrics, making them hard to identify from product specifications alone. |



Formaldehyde

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| Widely used to | Make fabrics wrinkle-resistant, shrink-resistant, anti-static or anti-mildew |
| Commonly found in | Wrinkle-free apparel, curtains, upholstery and blended fabrics |
| Concerns | Formaldehyde is known human carcinogen and causes respiratory irritation and allergic skin reactions, even at low exposure levels |
| Regulatory and market trends | Regulated in textiles in China and Japan, and under Oeko-Tex® standards. Many brands have set internal formaldehyde limits |
| Why the need for chemical transparency? | The substance is often used in finishing processes that may not be disclosed. Knowing where and how it's used is essential for compliance and safer product development. |



Azo dyes

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| Widely used to | Provide vibrant, long-lasting colors in textiles |
| Commonly found in | Brightly dyed fabrics, especially reds, oranges, yellows, and blacks |
| Concerns | Certain azo dyes can break down into carcinogenic aromatic amines, posing risks through skin contact or prolonged exposure |
| Regulatory and market trends | Restricted in skin-contact textiles in the EU, Turkey, and other regions, and limited under Oeko-Tex® standards |
| Why the need for chemical transparency? | Color alone doesn't reveal chemical content, and similar-colored fabrics may have very different chemical profiles. Chemical transparency is essential for compliance and safer product development. |



Heavy metals (lead, cadmium, chromium VI and more)

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| Widely used to | Pigments, dyes, mordants and tanning agents |
| Commonly found in | Pigments (reds, yellows and greens), leather goods and some metallic finishes |
| Concerns | Heavy metals are toxic even at low concentrations. Exposure is linked to neurotoxicity, organ damage, cancer and environmental contamination |
| Regulatory and market trends | Strict limits under REACH, California Proposition 65 and Oeko-Tex® standards. There is growing pressure for metal-free colorants and finishes |
| Why the need for chemical transparency? | Heavy metals may be present in dyes or finishes without clear labeling. Transparency is essential for product safety and compliance. |



Why are these substances of concern hidden?

Many harmful chemicals widely used in textiles - like PFAS, azo dyes and formaldehyde - are often mistakenly left off safety data sheets (SDSs) and other supplier documents. They're often used in coatings, dyes, or treatments applied during manufacturing, often with limited supplier disclosure.

Without chemical transparency, these substances can remain undetected in your products, posing hidden risks to health, the environment and your brand.

What you can do next

Chemical transparency is now essential for compliance, sustainability and consumer trust.

With the right tools, your business can:

- Identify hidden risks in your materials and supply chain
- Meet global compliance requirements like REACH, Prop 65 and K-REACH
- Stay ahead of emerging chemical regulation by knowing the issues before they arise
- Build safer, more sustainable products that consumers can trust

How Enhesa Sustainable Chemistry helps

We empower textiles businesses to reduce potential risks and make confident, safer chemicals decisions with:

- Chemical list screening for compliance and beyond
- Chemical hazard assessments backed by expert toxicology insights
- Supplier engagement tools to uncover hidden risks and phase out chemicals of concern
- Expert support to advance your sustainable chemistry goals