

Are there laws that protect us?

The textile sector is one of the biggest polluters of all. Thousands of chemicals are used, some in small quantities, others intentionally added to textiles in larger quantities. Only a few chemicals fall under the specific „restrictions“ of the REACH regulation, e.g. some flame retardants, azo dyes, metals and ethoxylated nylphenols, which could have endocrine disrupting effects. The EU strategy for sustainable, recyclable textiles (initiated in 2023) and the Sustainable Products Initiative (SPI) could contribute to stricter regulation of harmful textile substances. There are no specific regulations for children's textiles. However, some eco-labels have certain requirements, which shows that conventional textiles are sometimes highly contaminated. In 2019 the Swedish and French health agencies have already applied to the European Chemicals Agency (ECHA) to restrict over 1,000 skin-allergenic substances in clothing.

Your right to information

When purchasing a product, ask whether it contains any substances of concern. For some substances (Candidate List of substances of very high concern (ECHA)), there is an obligation to provide information within 45 days. Even if this only applies to certain chemicals, you can influence product policy by asking critical questions.

WECF is committed to pollutant free products in politics and in production. Support us with a donation.

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Would you like to know more?

www.projectnesting.org, <https://www.wen.org.uk/our-work/greenbaby/>, www.wecf.org

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General tips

- Always wash new clothes before wearing them!
- Avoid specially treated clothing and textiles.
- Buy clothes in second-hand shops and hand in clothes that are in good condition.
- People working in the textile industry are often exposed to high levels of chemicals. Employers should take extra care and follow health and safety regulations especially for pregnant women and parents.
- Labels provide little information about the chemicals used. You should, acquaint yourself on the following seals:



- Important: The criteria on which the labels are based are different. GOTS, Bluesign and Cradle to Cradle characterise textiles that have been produced without harmful chemicals. Ökoblume, Blauer Engel, Öko-Text Standard 100 test whether the end product contains harmful substances. Other recommended seals include Toxproof, IVN Naturtextil best or better and the IVN certificate for natural leather.

Tip

Where possible compare the information on the product with the hazardous ingredients listed in the table.

Further links

www.projectnesting.org
<https://www.wen.org.uk/our-work/greenbaby/>
www.oekotest.de (German)
www.test.de (German)

Apps

ToxFox, CodeC heck, Yuka

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Hazardous chemicals Application, occurrence & function

Chlorine and halogen compounds Bleaching agents (e.g. percarbonates, perborates, hydrogen peroxide; also hypochlorite) in detergents, heavy-duty detergents and cleaning agents

Nonylphenol ethoxylates, nonylphenol surfactants in cleaning agents in textile production

Azo dyes and heavy metals such as lead, cadmium, chromium as colourants in many textiles, chromates from tanning in leather gloves, shoes and textiles

Phthalates (DBP, DEHP, DINP, DIDP, DNOP, etc.) Plasticisers in rainwear, plastic shoes and prints (T-shirts, dresses, etc.)

Formaldehyde Anti-crease coating, preservative in cleaning agents

Triclosan preservative: in mattress covers and antibacterial clothing, functional and sports textiles

Silver/silver nanoparticles Antibacterial effects; in sportswear, socks, underwear

Perfluorinated compounds (PFOA, PFOS, etc.) in water and dirt-repellent textiles (e.g. outdoor clothing) and shoes

Flame retardants, brominated compounds phosphates, antimony, chlorinated paraffins. Flame retardants for textiles; finishing of textiles and leather, e.g. in bed linen, mattresses, home textiles

Organotin compounds such as tributyltin As biocides, e.g. in socks, shoes, sports and leisure textiles; odour-inhibiting

Dimethylformamide (DMF) Solvent in production; e.g. in children's shoes, gloves, rainwear, coated textiles

Possible effects on health and the environment

Percarbonates, perborates are corrosive and toxic to reproduction; hypochlorite can cause chemical burns and is very toxic to aquatic organisms

Degradation products are persistent, accumulate in the body, toxic (PBT), hormone-altering, poorly degradable in the environment and organisms

Can be carcinogenic; Trigger allergies and pollute the environment

Hormone-altering, toxic for reproduction

Allergenic, carcinogenic, irritating to skin and mucous membranes

Persistent in the environment, toxic to aquatic organisms; promotes bacterial resistance

Enter through the skin; toxic to cells, persistent in the environment and organisms; can promote the development of resistance in bacteria

Persistent in the environment, carcinogenic

Hormone-altering, some are persistent organic pollutants, toxic to aquatic organisms

Toxic to organisms and the environment

Harmful to reproduction

Protect children, Avoid harmful substances

WECF Guide
Updated edition



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Textile fibres

Natural fibres - wool and cotton

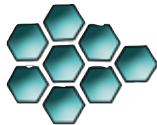
Most natural fibres are also treated with chemical substances. Chemicals such as nonylphenol ethoxylate have a negative effect on the hormone system of aquatic life. Cotton, the most widely used textile fibre in the world, is usually chemically treated because its highly flammable and wool is often treated for pests.

Tips

- **Oeko-Tex 100 labels** are used to identify products that are free and low in harmful substances; labels such as GOTS, Bluedesign and Cradle to Cradle also include the production process.
- **For small children**, choose clothing made of soft and absorbent cotton.

Tips

- **Fleece clothing is warm, light, comfortable, and dries quickly**; it is also available in pure cotton. Look for labels when choosing fleece products.
- **When buying your winter clothing**, look for products without perfluorinated compounds (PFOS-free).



Synthetic and artificial fibres (polyester, microfibre, viscose, lyocell, bamboo)

Viscose and lyocell are man-made fibres: The natural raw material (wood cellulose, bamboo) is modified during processing. Polyester is based on polyethylene terephthalate (PET). Microfibres and fleece are often based on PET or polyamide (nylon). Some garments are made water-repellent or waterproof using perfluorinated components, which are toxic and harmful to the environment. Synthetic fibres also release large quantities of microplastics.

Colourants & imprints

Source of toxins and allergens

Residues of dyes from production can cause allergies. More than 1% of Europeans are allergic to textile dyes. Certain dyes, such as some azo dyes, which are broken down into carcinogenic amines, are banned, but control is patchy. Other allergens are still permitted. Certain textile labels reduce or ban over 20 other dyes.

Tips

- **Always wash new clothes before wearing them for the first time.**
- **If a garment discolours during the first soak, wash it again. If it still loses colour after the second wash wash a few times and hang outside to air.**
- **Look out for eco-labels for clothing that is worn next to the skin and for clothing for small children.**



Tip

- **Avoid clothing with motifs and prints without a seal of approval. They may contain PVC-containing phthalates.**

PVC (polyvinyl chloride), **phthalates**, **nonylphenol**, **heavy metals**

Screen-printed or plastic-coated prints may contain PVC and hormonally active plasticisers (phthalates). Colourants may also contain residues of heavy metals, solvents, nonylphenol ethoxylates and numerous other chemical substances.

Chemical treatment of textiles & shoes

Flame retardant

Cotton and viscose are often treated with flame retardants to minimise their flammability. Antimony trioxide, for example, is used to treat synthetic textiles and is carcinogenic.



Shoes

Shoes may contain allergenic chromates from the tanning process, and rubber or plastic shoes may contain dimethylformamide DMF, phthalates, formaldehyde, or triclosan.

Tips

- **Do not buy strongly pungent, chemical-smelling shoes. This might be a sign of inferior quality and a possible contamination with harmful substances.**
- **Look out for seals.**

Tip

- **Avoid specially treated textiles such as antibacterial or crease-free clothing. The chemicals they contain can affect or be absorbed through the skin. This often also applies to «easy care» clothing.**



Dirt-repellent, antibacterial textiles

So-called „easy care“ clothing seems very practical, but at what price? Some contain formaldehyde, which irritates the respiratory tract and can cause allergies. In Germany, clothing must be labelled if it contains more than 0.15% free formaldehyde. Antibacterial or anti-stain treated textiles are popular as they are supposed to be resistant to odour or soiling but they affect the skin flora. In reality pollutants which are often quickly washed out can enter the sewage system during washing, choose resistant bacteria development.

Protect children, avoid harmful substances

What is the problem?

Clothing and textiles surround us everywhere. Yet, we know little about them. The textile industry uses around 3,500 chemicals, the dangers of which are barely known. According to EU regulations, over 240 chemicals are a risk to human health and 120 to the environment.

Some are more or less regulated due to their toxicity. Most textiles are made from synthetic fibres such as polyester or nylon. These cause large quantities of microplastics to be released, which end up in the environment and in the human lungs. Every year, we inhale up to 68,000 plastic microfibres from clothing, carpets, curtains and other textiles which are suspected of causing lung damage. It is difficult to recognise textiles that are free of harmful substances. Labelling is patchy; information on the type of cultivation and weaving of the various fibres, dyeing

methods, various treatments, etc., is usually missing, as is information on harmful substances. Globalisation further complicates the situation. Therefore, pressure from consumers is important to achieve transparency in this sector. This applies not only to harmful ingredients but also to environmental pollution and human exploitation in the textile sector, from which women, in particular, suffer.

Why are children particularly at risk?

Children, especially young children, have more permeable skin than adults and absorb harmful chemicals easily. For example, they react quickly to contact with certain chemicals associated with increasing allergies. Their immune and nervous systems are in the process of developing and so they haven't formed an adequate defence to exposure to toxic chemicals. In addition, young children also put textiles in their mouths and thus absorb harmful chemicals.