

Criteria for allergy-friendly Clothing (Textiles, textile fabrics)

BACKGROUND

Clothing can cause allergic reactions due to the ingredients in the textiles and can also irritate the skin, especially in people with sensitive skin.

The ECARF seal of quality generally characterises products as allergy-friendly if they are proven to have special properties that make them more suitable for allergy sufferers and highly sensitive people. Which properties are required depends strongly on the product. In the area of clothing, it depends on the intensity of skin contact, e.g. a lot of skin contact for socks, shoes, underwear and little for a belt, for example. In addition, the intended use of clothing must be taken into account, e.g. for sportswear, factors such as perspiration, water evaporation and mechanical properties can be of particular importance.

In all areas of clothing, the overall objective of the ECARF quality seal is to eliminate or reduce possible contact allergens and make the product more skin-friendly, as many allergy sufferers, but also many non-allergic consumers, suffer from sensitive skin. For these people, mechanical irritation caused by labels or seams, for example, can trigger itching. Some products can also be labelled for very special properties, e.g. mite-proof duvets or sportswear that protects against UV light. As the properties for which the label is awarded can vary, the details are always listed on the ECARF website.

In general, manufacturers must follow the rules below, but despite careful product composition and testing, the risk of an allergic reaction or skin irritation can never be completely ruled out.

1. CRITERIA

1.1. Risk assessment step 1

Risk assessment is a procedure in which the risk of adverse effects and intolerances is calculated. This calculation takes into account both the ingredients of the product and the expected method of application. In the case of a skin lotion, for example, the risk is calculated if it is applied to the whole body several times. For clothing, in addition to the ingredients, the degree of maximum skin contact (e.g. in shoes worn barefoot) is also taken into account, whereby interfering factors such as sweating, which is likely to be more pronounced with sportswear, for example, are also taken into account.

- Check for the presence of potentially toxic or allergenic substances in the finished product (it is recommended to wash the product 3 times with an allergy-friendly detergent before first use)
- If fragrances are used in the clothing, the standards of the International Fragrance Association (IFRA) should be used.
- The benefits and risks of antimicrobial finishing of clothing textiles should be carefully weighed against each other.
- Processing - no rough, open seams, no skin-irritating labels: It must be checked whether the finished product may contain skin-irritating parts such as labels or seams. The main focus should be on areas where there is a lot of mechanical friction, e.g. labels on the neck or under the belt.

- Garments should not contain any toxic substances (banned in the EU, but frequently used in Asia: Dimethyl fumarate, no perfumes, no formaldehyde-containing resins such as urea-formaldehyde resin or melamine-formaldehyde resin)
- Refining agent: free from highly allergenic substances
- Allergens that should mainly be tested for:
 - Chromium (in colourants or metal parts)
 - Nickel in metal parts
 - the following dyes:
 - e.g. para-phenylenediamine (PPD)/ para-toluenyldiamine (PTD) in dark dyes; disperse dyes from the mono, diazo and triazo colour groups such as DP orange 3, DP yellow 3, DP red 1, DP blue 124 and DP blue 106, no phototoxic dyes such as disperse blue

1.2. Risk assessment step 2

If potentially harmful ingredients or parts of the product are identified in step 1, it is assessed whether this represents a risk, as a) only the substances or parts of the clothing that come into contact with the skin need to be considered and b) there is a threshold value for all toxic and allergenic substances. If the concentration of the substance that is released from the product and penetrates the skin is below this threshold, the product can be used safely.

If potential harm is identified for potentially skin-irritating parts in the finished product, a further risk assessment can be carried out in an application study (see 2.) or alternative solutions can be considered as risk management, e.g. labelling the outside instead of the inside.

2. Application study

User tests have shown that the product or details of the product are acceptable for people with highly sensitive, eczematous skin. This is tested according to normal product use by at least 20 subjects with clinically relevant atopic dermatitis, in an anonymised application study. If no deterioration of the skin condition is observed in any of the subjects over seven days, the product is generally considered acceptable for sensitive skin using cosmetics as an example.

The duration of use for the test with textiles varies depending on the product type (one to several weeks; up to 12 hours of daily wear). The duration of use may be shorter for clothing, as mechanically irritating components are very quickly perceived by the above-mentioned group of neurodermatitis sufferers, who also serve as an indicator for people with very sensitive skin. Furthermore, extrapolation can be scientifically based, e.g. it can be assumed that a novel soft label that is tolerated in one product will also be tolerated in all garments.

2. QUALITY CONTROL AND COMPLAINT MANAGEMENT

The manufacturer has established a functional system of quality control that responds effectively to consumer complaints. The system ensures the following:

- The manufacturer's contact details, such as the address, telephone number and/or email address, are clearly visible on the product packaging;

- Consumer complaints are handled and followed up in an appropriate manner by qualified and experienced personnel of the manufacturer;

The assessment of consumer complaints and, if applicable, any inferred areas of improvement are reapplied to product quality and safety. The manufacturer agrees to make this data available to ECARF on an ongoing basis.