

UV protection textiles: Worst case scenario

Market tests from Austria, Germany and Switzerland show that manufacturers and traders label their sun-protective clothing with incorrect ultraviolet protection factors (UPF). This is due to a lack of harmonised and easy to understand labelling practices.

Skin cancer mainly develops because of damaging sun light. Skin Cancer has been increasing over the past decades. One in every three cancers diagnosed is a skin cancer according to Skin Cancer Foundation.¹ It comes as no surprise that the importance of UV protective textiles – especially for children’s clothing and shading textiles – has increased over the past years. In addition, based on EU-regulation the employer has to make sure employees are protected from any risks to sun light exposure. According to law, the employer must take care of personal protection from sun for example by providing working clothes that provide UV protection, helmets with neck curtains, sunglasses, etc.

Market tests show: Textile protection values not reliable

Lab tests recently carried out by OETI – Institute for Ecology, Technology and Innovation on behalf of the Chamber of Labour, which represents the interests of 3.4 million employees and consumers in Austria, looked at the UPF of different clothing². OETI’s laboratory analysis revealed that five out of 18 clothes showed incorrect UV-protection factors. The depicted values referred to the item’s new condition before use. In order to provide consumers with a reliable UPF, however the stretching of a fabric during wear, moisture from perspiration or water and washing, which affect the sun protection factor, must be taken into consideration when testing. OETI’s tests showed that after simulating these factors in the lab the UPF varied between 2 and 80. Susanne Bauer, Head of the Chamber’s market research team: “In almost all cases wear and tear diminished the protective effect, and as a result, the protection time is drastically reduced.”

Tests carried out in Germany and Switzerland show similar results.³

OETI tests for manufacturers and traders based on UV-Standard 801

OETI – as member of the „International Test Association for Applied Protection against UV Radiation“ – tests according to UV-Standard 801. A standard, which for example the German Cancer Research Center states on its website⁴. Angelika Hönecke, Head of OETI’s analytical lab comments on the three currently available testing methods: “There is the Australian/New Zealand Standard AS/NZS 4399:1996, the European standard EN 13758-1 and the testing standard UV Standard 801. The fundamental difference between these three is that the Australian/New Zealand

¹ WHO: <http://www.who.int/uv/faq/skincancer/en/index1.html>

² http://media.arbeiterkammer.at/stmk/UV-Schutz_bei_Textilien_und_Preischeck_von_Sonnencremen_2015.pdf

³ http://www.dotstextil.com/downloads/UV_Schutz_Textilien.pdf

⁴ <https://www.krebsinformationsdienst.de/vorbeugung/risiken/uv-strahlung.php>

Standard AS/NZS 4399:1996 and the European standard EN 13758-1 carry out tests with non-stretched and dry textiles. In contrast, UV Standard 801 tests wet and stretched textiles, which display mechanical wear as a result of use and have been subjected to artificial weathering, respectively. UV Standard 801 is stricter and reflects the real state of a worn, washed and stretched textile. In addition, there are different maximum limits. Whilst UV Standard 801 measures up to 80 of the common rating scale, the two other standard only evaluate up to 50.”

Angelika Hönecke concludes: “Measuring the UV protection factor according to UV-Standard 801 is based on the worst case wear and tear scenario. Manufacturers and traders have the certainty that the actual UV protection of the garment is not any lower than what is stated on the label.“

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