

TECHNICAL TUESDAYS

SUN PROTECTIVE TEXTILES - CONCLUDING PART

REF: TT/ APRIL 2019 / WK 5

Ultraviolet Protection Factor

The UV protection factor states how long someone wearing UV protective clothing can stay out in the sun without suffering skin damage. The basis for calculation is known as the intrinsic protection time of the skin, which can vary considerably depending on the individual skin type.



The skin type with blond hair and a very fair complexion has an intrinsic protection time of five to ten minutes. If they are exposed to the burning sun for longer than this without protection, they get a sunburn.

When protected by a textile material with a UPF of 20, this individual can stay in the sun by a factor of up to a maximum of 1.5 to 3 hours (20 x 5 min = 100 min to 20 x 10 min = 200 min), without risking damage to their skin.

UPF Ratings and Protection Categories Table		
UPF Rating	Protection Category	% UV Radiation Blocked
15, 20	Good	93.3 to 95.9
25, 30, 35	Very Good	96.0 to 97.4
40, 45, 50, 50+	Excellent	97.5 or more



UV Protective clothing global testing standards

In different countries, different testing methods are used. In the USA, testing is performed according to the standard AATCC 183 available from the American Association of Textile Chemists and Colorists. In the USA there is another method also followed, in which the fabric is first laundered, exposed to simulated sunlight and chlorinated water. This is done according to ASTM D6544 available from the American Society for Testing and Materials. British and European clothing standards follow BS 7914.



Wishing you a great week ahead!

Technical Tuesdays is a knowledge sharing initiative by Resil Chemicals Private Limited arc@resil.com | www.resil.com.