

# UV-protective effect of PPE for welders

## Objective

The objective is to investigate the extent to which personal protective equipment (PPE) for welders provides protection against artificial UV radiation. The test procedure provides information about transmission through textiles of wavelengths in the range 200-400 nm (UV-A, UV-B, UV-C), the amount of radiation energy that is actually transmitted,  $E_{eff}$ , and the maximum time  $\Delta t$  for which the textiles can be safely used during the welding procedure in question.

## Description

The protective effect is calculated by identifying the UV transmission spectrum. By settlement the transmission spectrum of the textile on the emissions spectrum of the welding procedure and of the weighting functions for the harmful effect on eye and skin, the total radiation strength that is actually transmitted  $E_{eff}$  can be calculated (in  $W/m^2$ ). Based on the values that are calculated and the limit values for exposure  $H_{eff}$  per day, as defined in EU Directive 2006/25/EG, thus the maximum period of time  $\Delta t$  for which the textiles in the respective welding procedure can be safely used can be worked out.

## The test is particularly suitable for

- Personal protective equipment for welders
- Workwear for people in jobs where they are exposed to UV

## Your benefit as a customer

- Assessment of the protective effect of PPE against artificial UV radiation
- Compliance with the limit values for exposure to artificial UV radiation under EU Directive 2006/25/EG (OStrV)
- Consumer safety and better protection at work for welders
- Products can be optimised at the development stage
- Fewer complaints because quality has been tested
- Your products can be marketed with material certification

## Label and certificates

- our products can receive material certification for personal protective equipment in new condition or after processing.

## Requirements for test samples

### **General:**

- Testing is carried out with or without material certification, as required by the customer.
- The testing can be carried out in new condition or after processing (domestic or industrial laundering).

### **Amount of material:**

- For testing in new condition: at least 20 cm x 30 cm (approx. DIN A4)

### **Duration of testing:**

- 10 working days after receipt of order and samples