

Certificates explanation

Emergency evacuation suit

TEXTILE TESTING INSTITUTE issued for the emergency evacuation suit certification [No 17 – 013](#).

The certification confirms that the products comply in selected parameters concerning heat and flame resistance (fire resistance) with the [Standard EN 469 Protective clothing for firefighters](#). The suit complies with the standard in the parameters of flame spread, heat transfer - flame, heat transfer – radiation and heat resistance.

In the description of the standard it is written: „This European Standard specifies minimum levels of performance requirements for protective clothing to be worn during firefighting operations and associated activities such as e.g. rescue work, assistance during disasters. The described clothing is not meant to protect against chemical and/or gas cleaning operations. This European Standard covers the general clothing design, the minimum performance levels of the materials used, and the methods of test to be used to determine these performance levels. The required performance levels may be achieved by the use of one or more garments.“

Protective clothing for firefighters consists of several layers and materials, and this combination ensures accomplishment of the standard. Our evacuation suit consists of textile about 2 mm thick, infused with a solution. The textile was even better than the protective clothing for firefighters in the parameters of direct flame resistance.

The standard tests protective clothing for firefighters against **radiant heat** source 40 kW/m^2 – **Heat transfer - Radiation**. It is very difficult to calculate the temperature, but the temperature can be roughly estimated to be 600-800 °C. According to the testing protocol issued by the Ministry of the Interior - [Technical Institute of Fire Protection No 01/2015](#) was the emergency evacuation suit exposed to radiant heat source 56 kW/m^2 , this means the temperature is above 1000 °C. Even at this higher temperature our evacuation suit fulfilled the parameters of the standard and could resist heat for a longer time than the protective clothing for firefighters.

The performing of the test is documented in the following pictures.





Next test that was performed according to the European Standard EN 469 is **flame spread** 80 kW/m^2 for 10 s. No visible damage, shrinking or any other degradation was observed after this test.

The last test is **convective heat resistance – Heat transfer - flame**. In this test the sample is exposed to flame 80 kW/m^2 until it is totally destroyed. Also in this test the suit accomplished the required parameters.

The following pictures show the performing of the test.



All these tests confirm that the emergency evacuation suit fulfils the selected parameters of the European Standard EN 469, which must be accomplished by protective clothing for firefighters.