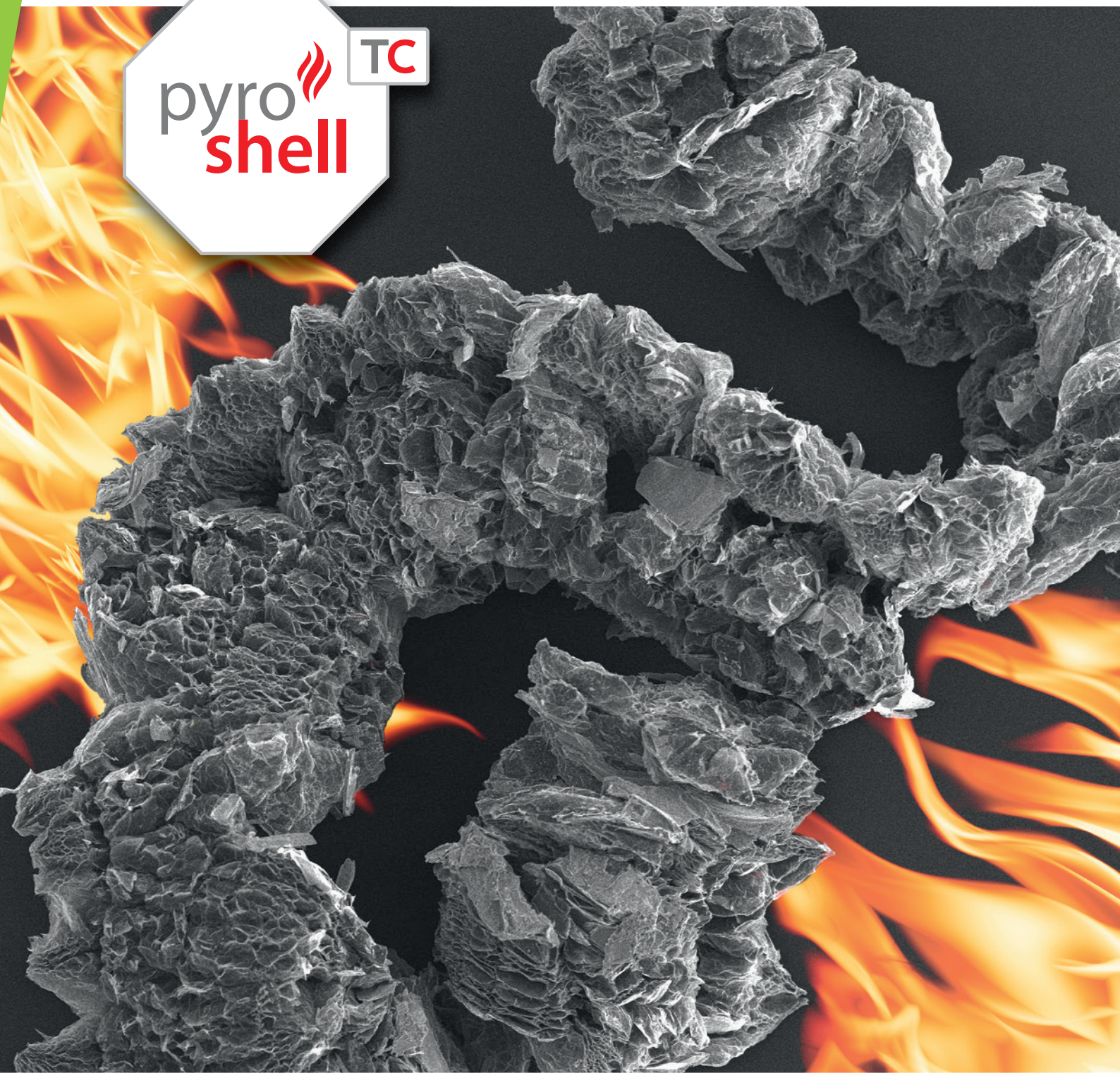


# Heat and flame protection with Pyroshell™ technology

**Topaz**  
by trans-textil



[www.trans-textil.de](http://www.trans-textil.de)

# Permanent heat protection



Patented Pyroshell™ technology provides permanent heat and flame protection in multifunctional laminate systems for a variety of application areas. The protective effect here is found primarily in the coated intermediate layer, with no bearing on the textile's overall appearance, enabling a great deal of flexibility when choosing an outer fabric made from synthetic fibres (e.g. PES / PA) for custom products.

# Ecological responsibility

Pyroshell™ functions by drawing on the natural raw material graphite. Embedded in a specially developed polyurethane matrix, the technology facilitates flame protection without using halogen, phosphorus or antimony. Pyroshell™ products made by Trans-Textil are tested and certified as safe from a human-ecological perspective in accordance with the latest Oeko-Tex® Standard 100 criteria.



## Expandable graphite: black magic

When exposed to heat, the layer-like structure of expandable graphite expands, much like an accordion, to multiple times the volume within fractions of a second. In doing so, it forms an intumescent layer that acts as a thermally insulating protective shield and significantly reduces the transfer of heat as well as the risk of burning.

The reaction time between the skin perceiving heat and the actual occurrence of burns is doubled compared to conventional substrates.



# Unique properties for individual products



Due to its flexible processing options in combination with other Trans-Textil technologies as well as its outstanding performance, Pyroshell™ functional laminate systems are particularly suited to custom products such as:

- ▶ personal protective equipment in accordance with EN ISO 11612 and EN ISO 11611
- ▶ workwear offering protection against electric arcs in accordance with EN 61482-1-2
- ▶ multifunctional protection in combination with, for example, EN 20471, EN 343, DIN EN 1149
- ▶ protective clothing for public authorities & security forces
- ▶ defence and IR signature suppression
- ▶ technical applications

In partnership with:



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