PYROFAB® Sol

PASSIVE FIRE PROTECTION

FIRE PROTECTION FABRIC FOR SOLAR MODULES


Exemplary image for an SBI fire test

Fires can occur in PV systems in different ways. One common cause is electrical faults in the system that cause a short circuit. This may be due to inadequate installation, faulty cabling or insufficient maintenance.

Faulty or damaged solar modules caused by external influences such as hail or storms are another potential trigger for fires. Fires can also occur if there is insufficient protection against overheating, for example due to inadequate ventilation or overloading of the system.

Several years ago, the Fraunhofer Institute and TÜV Rheinland carried out extensive research into the fire risk of solar power systems over a period of several years. In their final research report, the experts unanimously came to the conclusion that solar power systems do not pose a significantly higher fire risk compared to other technical systems in terms of the number of fires that occur.

Nevertheless, the amounts of damage, especially in individual cases, are immense and sometimes run into millions of euros, especially in commercial areas such as warehouses, industrial plants or even furniture stores.

In collaboration with H.K.O. Isolier- und Textiltechnik GmbH, Sonnen Stark GmbH is presenting a specially developed fire protection fabric that serves as an effective fire protection barrier between the PV system and the flat roof:

PYROFAB®Sol

The protective effect of the fabric was tested in a fire test with a representative construction of a PV system at Currenta Brandtechnologie.

- Successfully prevents the spread of fire from and around photovoltaic systems on flat roofs
- Provides passive protection for buildings
- Robust and durable thanks to weather-resistant coating
- Hardly any additional roof load due to light surface weight of < 0.6 kg/sqm
  - Taking into account DIN EN 1991-1-3 : 2010-12 - Actions on structures - Part 1-3

SAINT-GOBAIN

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Surface weight [g/sqm]	DIN EN ISO 12127	570
Width [mm]	DIN EN 1773	1.500
Thickness [mm]	DIN EN ISO 5084	0,45
Weave [fabric]	DIN 61 101-1	Cross twill 1/3
Filamentdiameter [µm]	DIN EN ISO 137	9
Coating		both sides
REACH	1907/2006/EU	conform
RoHS	2011/65/EU	conform
Classification	DIN EN 13501-1	B - s1, d0
UV/ozone resistance *		excellent
Spec. surface resistivity ρ [Ω]	DIN EN 1149-1	> 3,2 x 10^{13}
Dielectric strength [kV/mm]	DIN EN 60243-2	
	Fabric	> 8-12
	Coating	> 18

* as the product is not a functional sealing membrane, but a supplementary fire barrier, the conventional standards for roof sealing membranes do not apply

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