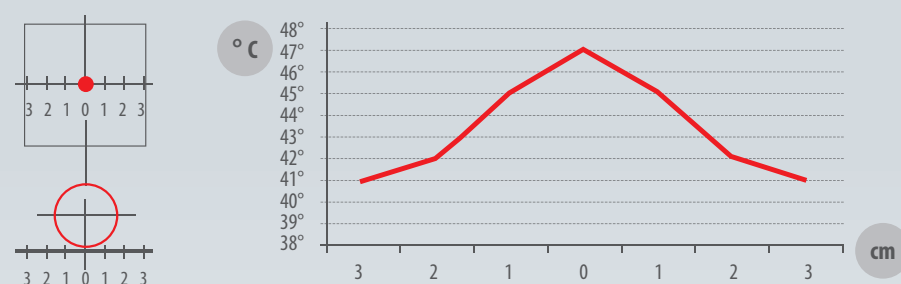


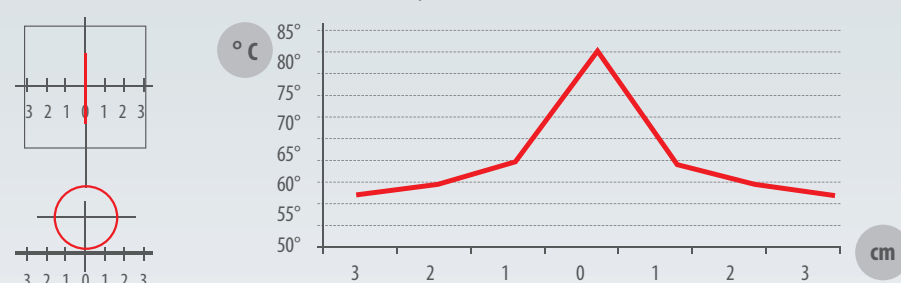
## DISTRIBUTION OF THE TEMPERATURE ON A LAMINATE PROTECTED BY "TEKNOFIBRA® CONTACT" IN DIRECT CONTACT WITH AN EXHAUST PIPE AT A TEMPERATURE OF 800° C

**Teknofibra® Contact**, is a heat reflective adhesive rigid support, designed to protect parts in direct contact with high temperatures. In the image the verification test of the behavior of a sheet of composite material that is protected by "**Teknofibra® Contact**" and placed in contact with a body at a temperature of 1000° C.

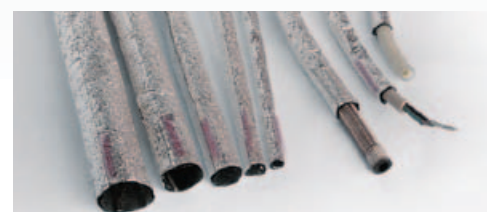
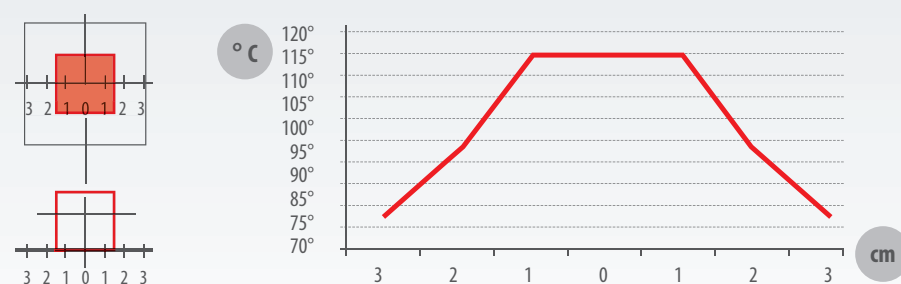
### PUNTIFORM CONTACT - Hemisferical thermal diffusion



### LINEAR CONTACT - Cylindrical thermal diffusion



### DISTRIBUTED CONTACT - Flat thermal diffusion



**Teknofibra® Sleeve**



**Teknofibra® Shaped**

A NEW ERA IN HEAT PROTECTION

Distributed by:



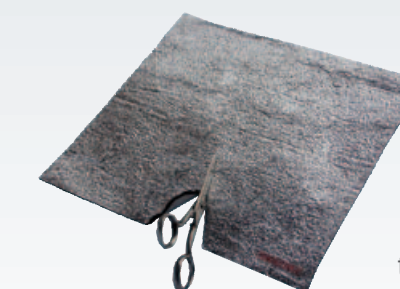
[www.teknofibra.it](http://www.teknofibra.it)

MOTORSPORT

# TEKNOFIBRA®

A NEW ERA IN HEAT PROTECTION

**Teknofibra®** is the registered trade name for our unique range of heat reflective materials. The background of the **Teknofibra® Company** is in the field of acoustics, energetics engineering, Industrial, Environmental and Construction industries.

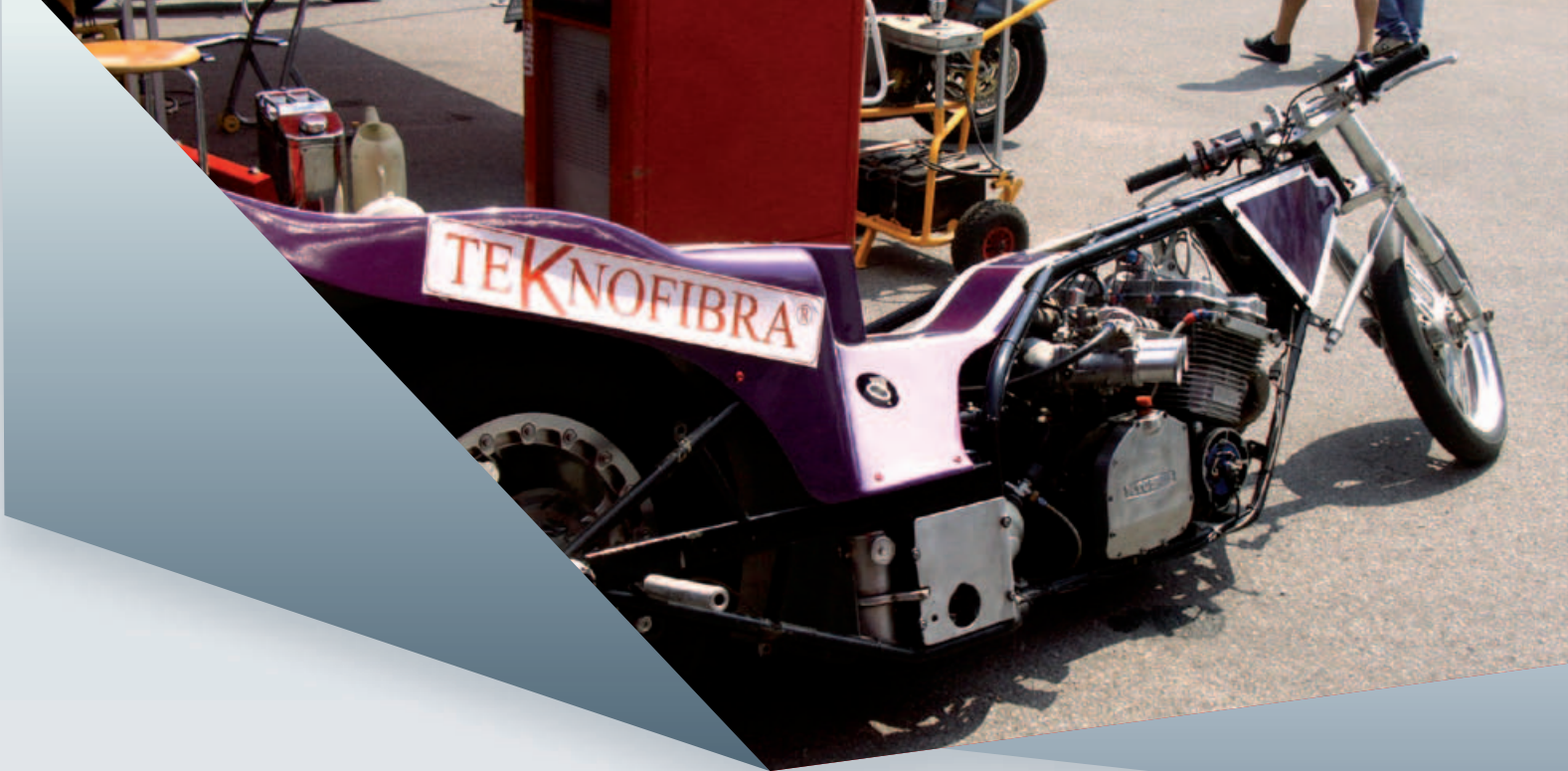


**Teknofibra®** products are very lightweight, heat reflective, sound absorbing and also adhesive. This unique material protects parts mounted in close proximity to high temperature heat sources that would otherwise be damaged without adequate protection. **Teknofibra®** is offered in standard sizes or can be profiled to customer requirements.

During manufacture and development, **Teknofibra®** has been constantly subject to laboratory testing. **Teknofibra®** thermal barriers have raised the standard in Motorsport heat protection. Today

**Teknofibra®** has the enviable position of leading the way in thermal and acoustic materials without equal.





PROPERTIES

Teknofibra®, thanks to carbon fibers which constitute the technological essence, has the following unique characteristics:

- *Totally non-toxic and physiologically safe*
- *Does not burn*
- *It does not produces emissions toxic or harmful in case of fire*
- *Absorbs a high amount of moisture*

Teknofibra® is provided with a coating that is heat-reflecting / low-emissivity on one side and with the application on the opposite side of a special adhesive resistant up to 250 ° C.

For the realization of Teknofibra®, the carbon fibers undergoing an innovative process, which enables fundamental improvements:

- *A significant reduction of the apparent densit*
- *The reduction of the thermal conductivity from 0.4 to only 0.029 W/mK.*
- *A substantial increase in acoustic performance*

The carbon fiber, thanks to Teknofibra®, now have a new scoreboard:

1.	EXELLENT FLAMMABILITY CLASSIFICATION	-	S-a	-	EN 532, EN 533.
2.	GOOD FIRE BEHAVOIR	-	Good	-	DIN 4102.
3.	THERMAL CONDUCTIVITY	λ	0,029*	W/mK	* to 40° C, 0,022 to 0° C and 0,045 to 350° C. to pressure of 1013 mb. Are available the curves that relate the thermal conductivity at the pressure variation and moisture.
4.	LOW EMISSIVITY	ε	0,045	-	Value mediated between the minimum of 0.035 and a maximum of 0.055 for a surface that has long remained exposed to high temperatures.



5.	ELECTRICAL RESISTANCE	Ω	10 <sup>8</sup>	ohm	Unlike the carbon fibers that are excellent conductors, Teknofibra® is completely insulating.
6.	ELECTRICAL RESISTANCE	M Ω	>200	ohm	Annexed B, UNI EN 1869:2002.
7.	SOUND ABSORPTION	α	0,9	-	Apparent sound absorption according to ISO 354 at a frequency of 1 KHz relative to a mat of 25 mm without heat-reflecting film. The performance depends essentially on the frequency and application. We are at your complete disposal for detailed technical information.
8.	DENSITY	ρ	73	Kg/m <sup>3</sup>	Average bulk density of the fabric only. The adhesive and the film reflective determine an increase of the density of 370 g/m <sup>2</sup>
9.	CONSTANT VOLUME WITH THE VARIATION OF PRESSURE	ΔV	0	-	Teknofibra® while having the performance of the best materials with closed cells, Teknofibra® is with cells open and this makes it dimensionally and structurally insensitive to pressure variations.
10.	IT DOES NOT RELEASE DUST	-	-	-	Does not contain dust therefore there is no emission of dust with the rapid decrease of the pressure.
11.	HIGH MOISTURE ABSORPTION	Δρ	>10	Kg/m <sup>3</sup>	The capacity of the fibers to absorb a large quantity of water, allow to avoid the presence in the liquid state under conditi ons of condensation temporary or cyclic and preserve the thermal and acoustic characteristics.
12.	DOES NOT BURN	LOI	50	-	Teknofibra® it needs in order to be able to burn, the presence of 50% of oxygen in the air of combustion that it contains only 21%.
13.	100% NON-TOXIC	-	-	-	Teknofibra® guarantees maximum safety physiological.
14.	IT IS STABLE AT HIGH TEMPERATURES	t	350	°C	Teknofibra® is indefinitely stable at the temperature of 350 ° C and withstands without serious structural alterations temperature peaks up to over 600 ° C.



APPLICATIONS

The main applications of Teknofibra® in motorsport:

- *Protect bodywork and any other parts in close proximity to exhaust systems, turboís etc and any other heat sources*
- *Used as flame & heat barrier between engine/exhaust tunnel & cockpit*
- *Placed between air intake & throttle body to maximise cold air intake*
- *Applied to fuel tank/systems to keep fuel cool*
- *To keep temperatures more stable in shock absorber reservoir, oil tanks etc in close proximity to exhaust systems*
- *Reduce noise levels in conjunction with being a heat barrier*

THERMAL PERFORMANCE AT DIFFERENT TEMPERATURES  
Comparison with other well-know material

