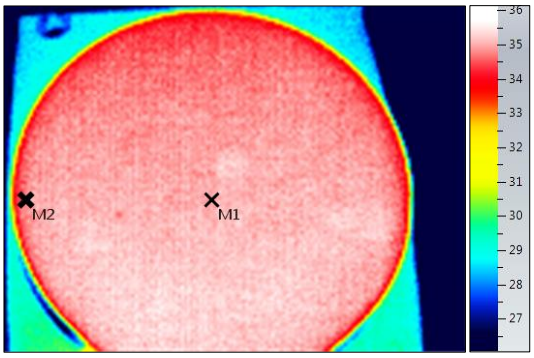
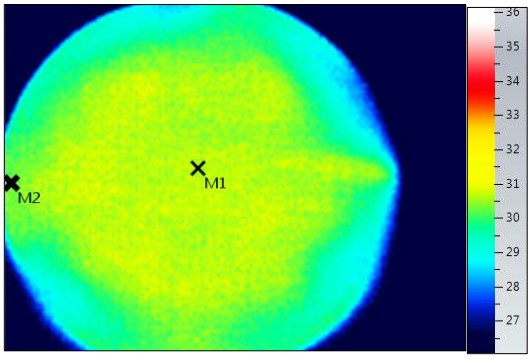
AREKA Advanced Technologies

THERMOREGULATION STUDIES

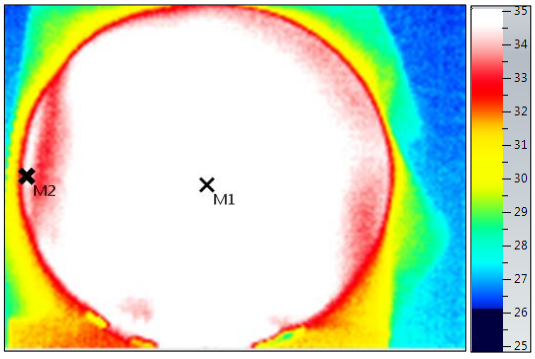
Today's textiles donot function for covering body, but also a real comfort...
Particularly thermal comfort is directly related with your physical/physicological condition.
Our thermoregulated fabrics can absorb the heat produced by the body and will give you a «cool» feeling, which will enhance your productivity...



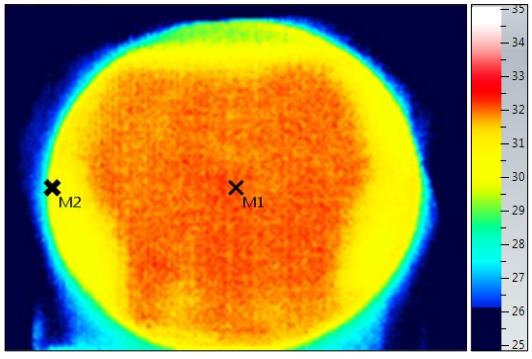
COOL, t=0,
M1=35°C, M2=35°C.



COOL, t=30 min,
M1=30,5°C, M2=30,2°C.



COOL+SHP, t=0min
M1=35,5°C, M2=34,5°C.



COOL+SHP, t=30 min,
M1=31,9°C, M2=30°C.

Fabrics were kept over the heaters at 37°C for 30 minutes. The final temperature of fabrics was lower than the initial about 5-7°C.

Tested with Testo 870 thermal cams.

Textiles | Energy | Composite | F&S | Biomedical

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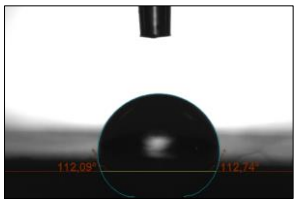
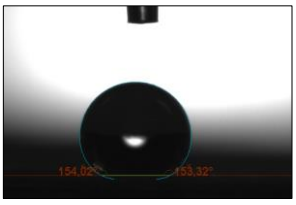
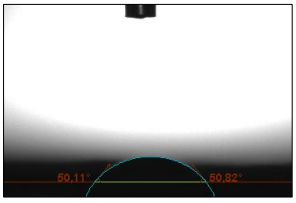
WATER/SOIL REPELLENCY STUDIES



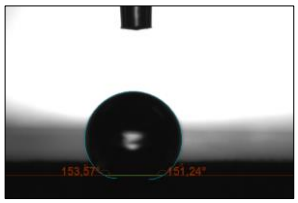
White PET fabric 1, Original



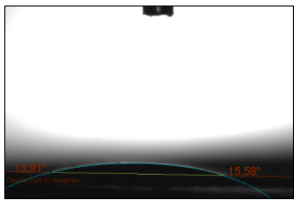
White PET fabric 1, Recipe 2



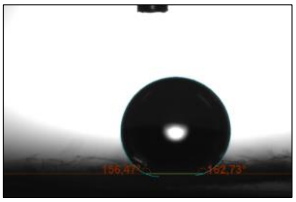
Black PET fabric, Original



Black PET fabric, Recipe 2



White PET fabric 2, Original



White PET fabric 2, Recipe 2

Recipe No	ORIGINAL	RECIPE 1	RECIPE 2
		Water-Soil repellecy	Water-Soil repellecy + Cooling Effect
Sample 1	123,8°	145,5°	154,4°
Sample 2	23,8°	159,8°	157°
Sample 3	92°	152°	148,4°

The graphs and table indicate the contact angle that is formed between a 7ml droplet and fabrics. Those clearly prove the superhydrophobicity.
Below you will see the durability of the treatment after 10 and 20 washes.

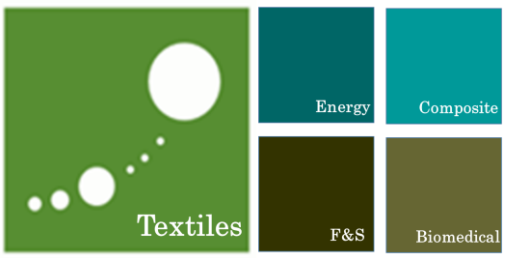
		Cool 1		Cool 2	
		ORIGINAL	AFTER 20 TIMESWASHING	ORIGINAL	AFTER 10 TIMESWASHING
Oil Repellency-Hydrocarbon Resistance EN ISO 14419					
	White PET Fabric 1	3,5	3,5	2,5	2,5
	White PET Fabric 2	4,5	4	2,5	2,5
	Black PET Fabric	4,5	4,5	3,5	3,5

Grading: max: 8, min: 0, number of specimen: 2

		Cool 1		Cool 2	
		ORIGINAL	AFTER 20 TIMESWASHING	ORIGINAL	AFTER 10 TIMESWASHING
Water Repellency-Spray test EN ISO 4920					
	White PET Fabric 1	ISO 5	ISO 4	ISO 4	ISO 3
	White PET Fabric 2	ISO 4	ISO 3	ISO 3	ISO 2
	Black PET Fabric	ISO 5	ISO 5	ISO 5	ISO 4

Spray rating: max ISO 5, min:0, water temperature 21°C

Excellent water/oil repellent effects
High durability



Flexible adjustment of the components
Cooling Comfort
Treatment + Stain Resistancy