

Capabilities

# SURFACE TREATMENTS

In addition to the deep know-how in weaving, SAATI has unsurpassed experience in surface treatments. Surface properties modification plays a key role in matching the requirements of all the different filtration applications in which monofilament woven mesh could be used.

Through all the different solutions, SAATI has in house it is possible to dramatically change surface behavior by adding specific and dedicated functionalities.

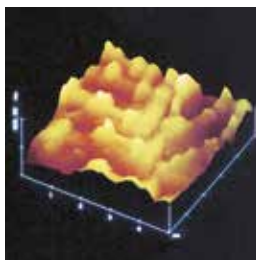
Almost any surface treatment can be applied including customers own proprietary coating.



### Dyeing

Fabrics can be dyed to virtually any color for both aesthetical or functional purpose.

Food grade dyes can be used. Select one of our many standard colors or have one specially matched.



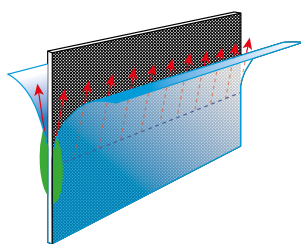
### Plasma Treatment

SAATI has pioneered the use of cold plasma to modify the screen fabrics surface properties.

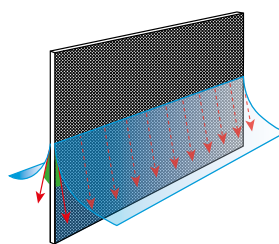
Plasma treatment modifies the very topmost layers of fabric surface, through chemical and physical modifications, without affecting the general mechanical properties of the material.

Effects of plasma treatment are surface cleaning, surface roughness increase and wettability increase due to the bonding of hydrophilic groups. All these modification enhance the adhesion of other substrates onto fabric surface. Plasma treatment could be effectively used to prepare fabric surface for wet chemical coating, achieving in this way a better coating consistency and resistance or to enhance the bonding strength whenever the fabric is used as a substrate. The intensity of the treatment can also be modified to meet customers unique requirements.

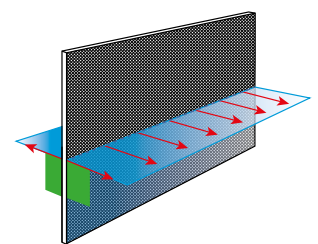
Surface wettability could be easily described in terms of contact angle:



Hydrophobic



Hydrophilic



Neutral



### Hydrophilic Treatment

In order to increase the fabric surface wettability Saati has developed a hydrophilic treatment, which is obtained combining a dedicated plasma treatment with a dipping process using a particular surfactant.

Thanks to this treatment fabric surface becomes extremely wettable, which is a desirable characteristic for the diagnostic test strip market, in which a very fast and effective wicking and spreading performances are necessary.



### Hydrophobic treatment

For all the applications requiring a protection against water Saati has developed an hydrophobic treatment, which is based on a wet chemical process eventually combined with a plasma treatment for enhanced effectiveness.

The treatment is capable to reduce the surface energy of fabric surface, making it repellent to many different liquids, including ones with a very low surface tension.

Main application of this kind of treatment is the protection of electronic devices from water intrusion and water removal from diesel fuel in the automotive sector.



### Metal Coating

Fabric metallization could be achieved through different processes, including vacuum processes (evaporation or sputtering) or galvanic processes.

Adopting both these technologies Saati is capable to metalize polyester and polyamide mesh with several different metals like Aluminum, Copper, Titanium, Cromium and Nickel.

Other metals could be used upon specific request.

Beside the aesthetical modification metal coating process could impart interesting properties to synthetic meshes, making them electrically conductive. This means that metal coated mesh could be used for charge dissipation or for shielding purposes.

### Antistatic Finishing

An antistatic treatment can be applied to reduce the build-up of static charges often associated with synthetic fabrics. Typically required in screen printing application, this performance could be helpful to ease filter manufacturing process of enhance filtration performances whenever static build up could be a limit.

### Medical Finishing

Fabrics destined for medical applications are treated with a dedicated finishing cycle that includes a cleaning phase performed in a non-water based proprietary system.

This finishing ensures that the fabric meets specific pyrogen levels and compliance with USP Class VI.

### Addresses

**SAATI S.p.A - Headquarters**  
Via Milano 14  
22070 Appiano Gentile (Co)  
Italy  
T: +39 031 9711  
F: +39 031 933392  
Email: [info.IT@saati.com](mailto:info.IT@saati.com)  
Website: [www.saati.com](http://www.saati.com)

**SAATI Deutschland GmbH**  
Ostring 22  
46348 Raesfeld  
Germany  
T: +49 2865 95800

**SAATI Americas Corp.**  
201 Fairview Street Extension  
SC 29644 Fountain Inn  
USA  
T: +1 (864) 601 8300

**SAATI Technical Fabric (Tianjin) Co., Ltd.**  
Cross of Saida 2nd Branch Road and Saida  
Century Avenue,  
Xiqing Economic Development Area,  
300385, Tianjin  
P.R.C  
T: +86 22 23960843

### Company Profile

SAATI is a leader in the development, production and commercialization of high-tech precision monofilament and multifilament fabrics for advanced industrial application in several business segment.

SAATI is specialized in the production of technical fabrics and components in polyamide, polyester and polypropylene, with special finishing treatments.

The products are used in a wide range of different filtration fields, such as automotive, water, medical industries, acoustic, appliance sectors, milling, along with many other industrial applications.