PLASMALEX

Europlasma PlasmaGuard® coatings

PlasmaGuard® sets a new standard in ultra-thin, high-performance water repellent and barrier coatings for the protection of a wide range of electronics, but also various non-woven or nanofiber materials. They are not only high-performing, but also environmentally responsible, being 100% PFOA- and PFAS-free.



High-performing
Ultra-thin coatings for the protection of a wide range of material.

Cost-effective
A complete range of high quality industrial coating equipment and processes, allowing for a high capacity throughput in production environments.

Environmentally friendly
All PlasmaGuard® coatings are environmentally responsible.

PlasmaGuard® coatings are available in 2 different variants, for distinctive applications

PlasmaGuard® S water repellent coating

PlasmaGuard® S is a completely halogen-free nanocoating, typically applied at a thickness of 10 to 200 nanometers. This coating is versatile; suitable for application on a wide array of materials such as electronics, plastics, textiles, membranes and medical devices.

- Water contact angle exceeding 105°
- No impact on acoustic performance of membranes
- Very low to no masking efforts required
- Excellent membrane breathability
- Fully transparent coating with superior optical transmission properties
- Biocompatible according to ISO 10993-5
- Not hypersensitive according to ISO 10993-10
- Abrasion resistant

PlasmaGuard® X barrier coating

The new PlasmaGuard® X ultra-thin barrier coating builds on the same strengths and unique properties of the PlasmaGuard® product line, while offering even higher barrier and corrosion protection properties.

PlasmaGuard® X is a fully PFAS-free dielectric barrier coating designed for applications requiring the highest level of protection such as PCBAs, sensors, medical devices, and implants.

This multilayer coating applied at a thickness below 1,5 µm outperforms conventional conformal coatings that are many times thicker.

- Exceeds IPX7 and IPX8 requirements
- Very low WVTR (down to 10^{-2} g/m²/day)
- Excellent 3D conformality
- Ultra-thin (< 1,5 µm)
- Low masking efforts required
- Fully transparent coating with excellent optical transmission properties
- Pinhole-free
- Excellent dielectric properties
- Excellent chemical and moisture barrier properties
- Unrivalled sweat and salt water barrier properties
- Biocompatible

PlasmaGuard® X

Density (g/cm³)	1,29
Refractive index (n_D^{23})	1,64
Transmission visible range (%) (380-750 nm)	>90
Friction coefficient - STATIC	0,29
Friction coefficient - DYNAMIC	0,29
Durable peak temperature (°C) (100.000h)	80-100

Short term heat resistance (°C) (1.000h)	115
Melting point (°C)	290
Dielectric constant (1MHz)	2,95
Break down voltage DC (V) at 1µm	1100
Dielectric constant (1MHz)	2,95
Break down voltage DC (V) at 1µm	1100

Green technology

- 100% **PFOA-** and **PFAS-free.**
- **REACH Compliant for SVHCs**
- **RoHS and WEEE Compliant**
- **Free of Volatile Organic Compounds**

Plasmalex SAS
59 4ème Rue, ZAC Saint Charles 13710 Fuveau, France
+33 (0)4 42 53 83 20 info@plasmalex.com