



Engineered  
nano Products  
Germany AG

# Your Partner for High Performance Coatings



## EPG AG – Your Partner for industrial coating solutions

EPG AG is specialized on high performance coatings and in developing innovative and customized solutions based on sol-gel coating technology. We can offer:

- Proved and tested solutions for multifunctional coatings
- Development of new raw materials to meet the individual wishes of our customers
- One-stop-solution: raw material management, pre-treatment of component parts, lacquer development, robotic based coating technology, curing process, small scale and mass production including quality management.

## Your advantage

- High temperature stability
- High corrosion resistance
- Anti-fingerprint properties
- High abrasion and scratch resistance
- Transparent and colored surfaces
- Metal-look and metal-touch effect
- Substitution of chromium
- Cost reduction

# Nanoseal® – applicable for stainless steel



*Transparent Nanoseal-coating  
on polished stainless steel end pipes*



*Transparent Nanoseal-coating  
on stainless steel switch*



*Colored Nanoseal-coating  
on stainless steel undersurfaces of steam irons*

## Convincing properties

- Glass-like spray coating
- Resistance to tarnishing under high temperature
- High corrosion and sub-surf migration resistance
- High scratch and abrasion resistance
- Resistance to car wash solvents
- Easy-to-clean and anti-fingerprint effect
- Colored and transparent coatings
- Coatings on three-dimensional and bendable parts possible
- Brushed, polished or blasted structures are preserved
- Almost invisible coating does not change visual and haptic properties
- Environmental friendly production process

## Stainless steel performance

Temperature stability at 550 °C	> 1000 h
Corrosion resistance: SS-Test	> 1000 h
CASS-Test	> 96 h
Kesternich-Test (0,2 l SO <sub>2</sub> )	10 cycles
Abrasion resistance: IEC-Test	< 150 µm, 500 cycles Scotch Britt eraser without scratches
Car wash test (Amtec-Kistler)	> 5 cycles
Acid-Thermal-Alkali change test (pH 1-14)	No defect
RoHS guidelines	accordant

# Saphiral® – The revolution for Aluminum protection

## Convincing properties

- High corrosion resistance
- High scratch and abrasion resistance
- Outstanding resistance against aggressive chemicals like acid, alkali or solvents
- Resistance against car wash solvents
- Spray coating substitutes anodizing, patent-registered technology
- Applicable to high polished and structured surfaces, e.g. brushed
- Almost invisible coating does not change visual and haptic properties
- Easy-to-clean and anti-fingerprint effect
- Transparent and colored coating with high aesthetic value
- Coating on three-dimensional parts are possible
- Variously applicable in the field of automotive (exterior and interior), sanitary, architecture or kitchen equipment
- Environmental friendly production process



*Transparent Saphiral coating  
on a brushed Aluminum end pipe*



*Black Saphiral coating on Aluminum*



*Transparent and anti-corrosion Saphiral coating  
on polished Aluminum surface*

## Performance on AlMg1

Salt spray test	> 1000 h
Condense water constant atmosphere test	> 240 h
Weathering stability in dry hot climate	> 1500 h
Acid-Thermal-Alkali change test (pH 1-14)	> no defect
Car wash test (Amtec-Kistler)	> 5 cycles
Abrasion resistance (Crockmeter test, white eraser)	> 1000 cycles
CASS-Test	> 96 h (Ri 1)
Kesternich-Test (0,2 l SO <sub>2</sub> )	10 cycles
RoHS guidelines	accordant



Chemical synthesis for the development of new lacquer systems



Individual pre-treatment of surfaces



Robotic based coating technology for mass production

## Main advantages for our costumers

- Further substrates like titanium, magnesium, carbon or plastic materials are feasible, carbon steel under development
- Environmental friendly alternative to galvanic chrome plating
- Simple coating process leads to cost reduction in mass production
- **Unique selling point:** High temperature resistance and protection against corrosion, scratches and fingerprints on stainless steel and Aluminum
- **Additional competitive edge** New colors, materials, haptic and appearance of surfaces

## Further surfaces for coating:

- PVD surfaces
- Titanium
- Copper
- Zamac
- Anodized surfaces
- Low-alloy steel

## We deliver the ideal solution for your industry

 AUTOMOTIVE

 ELECTRO

 KITCHEN

 HOME



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