



PWIS CLEANING SOLUTIONS

COMPLETELY PERFECT SURFACES



PERFECT CLEANLINESS

THE REQUIREMENTS

In paint shops, especially, clean components are essential. Any contamination, which may cause disturbances in lacquering, must be completely removed.

Not only must the surface to be lacquered, e.g. car body parts, be free from any contamination that may cause disturbances in lacquer wettings (the PWIS), but also even the smallest components within the painting system.



Paint



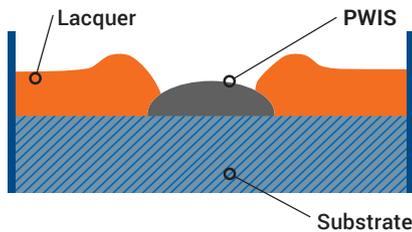
Wetting



Impairment



Substances



THE MECHANISM

Total wetting with lacquer requires that the lacquer's surface tension is lower than that of the substrate: $\sigma_{\text{lacquer}} < \sigma_{\text{substrate}}$

If the lacquer's surface tension is higher than that of PWIS, the lacquer will retreat from the substrate at the contaminated spots: $\sigma_{\text{lacquer}} > \sigma_{\text{PWIS}}$

PWIS contamination impairs uniform paint application and leads to blemishes and so-called craters.

THE CHALLENGE

All components, regardless of quantity, size and quality, must not only be clean at the beginning of application but also must not emit any paint wetting impairment substances during the complete application period.

In particular, the cleaning of elastomeric components, such as sealing elements, is an especially challenging task.

Beside the contaminants on the surfaces, such as mould release agents, that can be introduced to paint booths, some substances from the elastomeric material itself, e.g. softeners and processing aids, can leak out of the material over time and cause disturbances in lacquer wetting.

Therefore, cleaning processes for elastomeric components need to be particularly profound.



THE SOLUTION

APO's PWIS cleaning process can be customised to your individual requirements, to the material and to the degree of the components' contamination. Thus, it allows for perfect component cleaning whilst conserving resources.



The combination of wet-chemical processes with a patented low-pressure plasma technology ensures a quick, profound and persistent cleaning performance.

In particular, small, mass produced parts can be cleaned very effectively and will meet the required PWIS cleanliness testing.



YOUR BENEFIT



Customised cleaning solutions efficiently achieve the required PWIS cleanliness results and allow for compliance with the necessary PWIS tests.



The use of special cleaning technologies provides potential savings in time and cost.



No ingress of substances through residues, on or in components, that impair paint wetting in paint booths.



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