Substrates and Preparation

FOR PROFESSIONAL USE ONLY

Description

Product data sheets specify suitable substrates for related products. In this document, a range of substrates are mentioned that sometimes require dedicated preparation and sanding.
All sanding grits are related to dry sanding unless explicitly otherwise mentioned.

The indicated sanding steps in this document are based;
P80 - P120 - P220 - P320 - P400 - P500.
Comparitive sanding line;
P80 - P180 - P280 - P360 - P400.

Suitable substrates

Existing finishes
Steel
Aluminum (Anodized Aluminum)
Galvanized steel
OEM Electro coat
Polyester laminates (fiberglass), gel coat
All Sikkens polyester bodyfiller
All Sikkens Washprimers
Sikkens Polysurfacer
All Sikkens surfacers (fillers)

Suitable substrates and preparation

Existing finishes:
Clean and degrease the surface thoroughly prior to any surfacer application.
Pre-clean the surface with warm water and detergent, rinse sufficiently with clean water.
If bare polyester bodyfiller is exposed, avoid contact with water (e.g. waterborne degreaser)

Prior to the application of a sanding surfacer, dry sand the surface with P220 sanding grit. In the case of a wet on wet (non-sanding) application, finish by dry sanding with grit P320 and thoroughly degrease the surface prior to the application of surfacer.

Wet sanding can be done by using P1000 as final sanding grit. Preceding sanding steps can be executed with a coarser sanding grit but need to be suceeded by finer steps not larger then 200 in grit size.

Refinishing previously painted vehicles:
OEM-Original Equipment Manufacturer's paint dry film build is approximately 90-120 microns. AkzoNobel recommends applying refinish products over Original Equipment finishes or previously refinished vehicles only when that is of a sound finish.

Check the substrate for appearance, hardness, solvent sensitivity, sandability, blistering, delaminating, corrosion or any other signs that the substrate is not of a sound foundation.
When refinishing over previously painted substrates, there is always an element of risk. So, if there are any doubts the existing finish is not sound, it should be removed.

For an optimum refinish performance the total film build after refinish should not exceed 300 microns (not including polyester fillers). If the film builds are at or above this limit, paint removal will be necessary to reduce or remove excessive film build. This will help minimise any future defects that can be a result of excessive film build.

Defects that can result by excessive film build are:
- Soft finish of total system
- Inferior stone chip resistance
- Inferior adhesion (between layers)
- Cracking
- Contour mapping
- Wrinkling
- Loss of gloss

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Suitable substrates and preparation (continued)

Steel, Aluminum, Galvanized steel;
Thoroughly clean and degrease the surface. Prior to the application of a sanding surfacer, dry sand the surface with P220 sanding grit. In the case of a wet on wet (non-sanding/sealer) application, finish by dry sanding using P320 grit, and thoroughly degrease the surface prior to the application of surfacer.

For systems that require the highest standards i.e warranty apply one single coat of or Washprimer 1K CF to bare steel surfaces prior to any surfacer application.
In the case of Aluminum or Galvanized substrates, application of or Washprimer 1K CF **is necessary** to secure adhesion, allow a minimum flash-off time of 15 minutes at 20°C of the Washprimers prior to the application of any surfacer.

Anodized Aluminum
Natural oxidation of the aluminum is accelerated by an electro-chemical process which creates an aluminum oxide layer on top of the aluminum for optimum protection against environmental influences. To paint these types of aluminum, this layer **must** be removed completely (sanding or blasting).
No primer will give sufficient adhesion on top of any anodized aluminum oxyde layer.

OEM Electro coat;
After thoroughly cleaning and degreasing of the surface, direct application of Colorbuild Plus Non Sanding (wet-on-wet) version over rigid new undamaged genuine OEM Electrocoated parts is possible. Sanding is basically not required but in the case of doubt (securing optimum adhesion), the surface may be dry sanded using a P320 or a fine (grey) scuffing pad.
Thoroughly clean the surface prior to the application of surfacer (wet-on-wet / non sanding / sealer).
Note: *It is necessary to abrade OEM electrocoat parts using P320, with all other Sikkens Primer Surfacers*

Polyester bodyfiller and Polysurfacer;
Cured polyester should be sanded according a recommended sanding step system. (Never exceed a larger sanding step then 100 in grit size. Initially starting with P120 (optional P80), followed by P120. As final sanding step use P220 prior to surfacer application.

- *Use a guide coat between each sanding step to visualize the sanding scratches created.*
- *Finer sanding is possible.*

Sanding scratches in the existing finish surrounding the polyester area need to be removed. This is done by using P220 followed by P320 to create a uniform featheredge. This is also the final sanding step in the case of application on a larger area (total panel).
In the case of spot repairs, finish the outer area of the spot with P400 as the final sanding step to reduce the risk of contour mapping. Thoroughly degrease the surface prior to the application of surfacer.

Polyester, gel coated laminates (fiberglass);
Pre-clean the surface using warm water and detergent, then rinse sufficiently with clean water.
Dry and clean the surface prior to dry sanding with P220 followed by grit P320.
Thoroughly degrease the surface prior to the application of surfacer.

- *The gel coat of the polyester laminate will in almost all circumstances contain very small pinholes that are difficult to detect. Therefore it is strongly recommended to cover this surface with a sanding surfacer instead of a wet-on-wet or direct topcoat application.*
- *If the gel coat is broken or has been sanded through, additional bodyfiller application might be necessary to fill and seal off any glass strands in the fiberglass.*

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Suitable substrates and preparation (continued)

Sikkens Washprimer 1K CF
After thoroughly cleaning, degreasing and sanding, Washprimer 1 K CF can be applied over steel, galvanized steel and aluminum for optimum adhesion and corrosion protection.

- Allow for a minimum of 15 minutes flash off at 20°C prior to the application of any surfacer.
- Direct topcoat (in particular basecoat) application is **not** possible

Surfacers (fillers)
After complete through hardening, the surfacer can be pre-sanded, by block sanding, with P320, followed with P400.
Final sanding step should be executed using the grit specified for the desired topcoat.
Wet pre-sanding can be done using P600 grit, followed by P800 and preferably P1000 as final step.
After sanding, thoroughly clean and degrease the surface prior to topcoat application.

Plastic car parts: For detailed information on plastic car parts see TDS S8.06.03

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