

AFS PE Powder Coating Process Times

Following data should give a basic recommendations for AFS PE powder coating processes and times.

Maximum Coating Thickness

Recommended max coating thickness are

< 3 mm for AFS 1 coating resin

< 5 mm for AFS 2 coating resin

Surface Quality

The coating surface quality depends on the substrate material, coating thickness and possible pre-heating. Best surface is reached with preheated substrates @ 1-2 mm coating thickness but also acceptable surface quality is reached for up to 4 mm coating thickness.

Sand Blasting

For best AFS coating quality, clean and oil free substrate surfaces are recommended.

Depending on impurity, sand blasting may take up to 10 minutes/sqm for cleaning.

Pre-Heating

No pre-heating of substrates is required for coating of plastics (HDPE,PP), Aluminium, Concrete, Steel up to wall thickness < 4 mm, etc.

Pre-heating of steel substrates > 4mm is recommended

Pre-Heating Temperatures

110°C (230°F) for AFS 1 coating resin

125°C (257°F) for AFS 2 coating resin

Pre-Heating Times

Preheating times depend on substrate wall thickness but can be assumed approx. 40% of the coating time, so 30% of the total process time.

Approx. 5 minutes/sqm

Coating Speed

Without preheating:

4-5 sqm/hr for 0.5 mm coating

3 sqm/hr for 3.0 mm coating

With preheating:

9 sqm/hr for 0.5 mm coating

5 sqm/hr for 3.0 mm coating

Test Sample Coating Times

3 mm AFS 2 coating of steel pipe substrate sizes Ø= 300mm, L=400mm, wall thickness 12 mm.

3 minutes – sand blasting

3 minutes – preheating to 125°C (257°F)

2 minutes – 0.5 mm coating

6 minutes – 0.5 to 3 mm coating