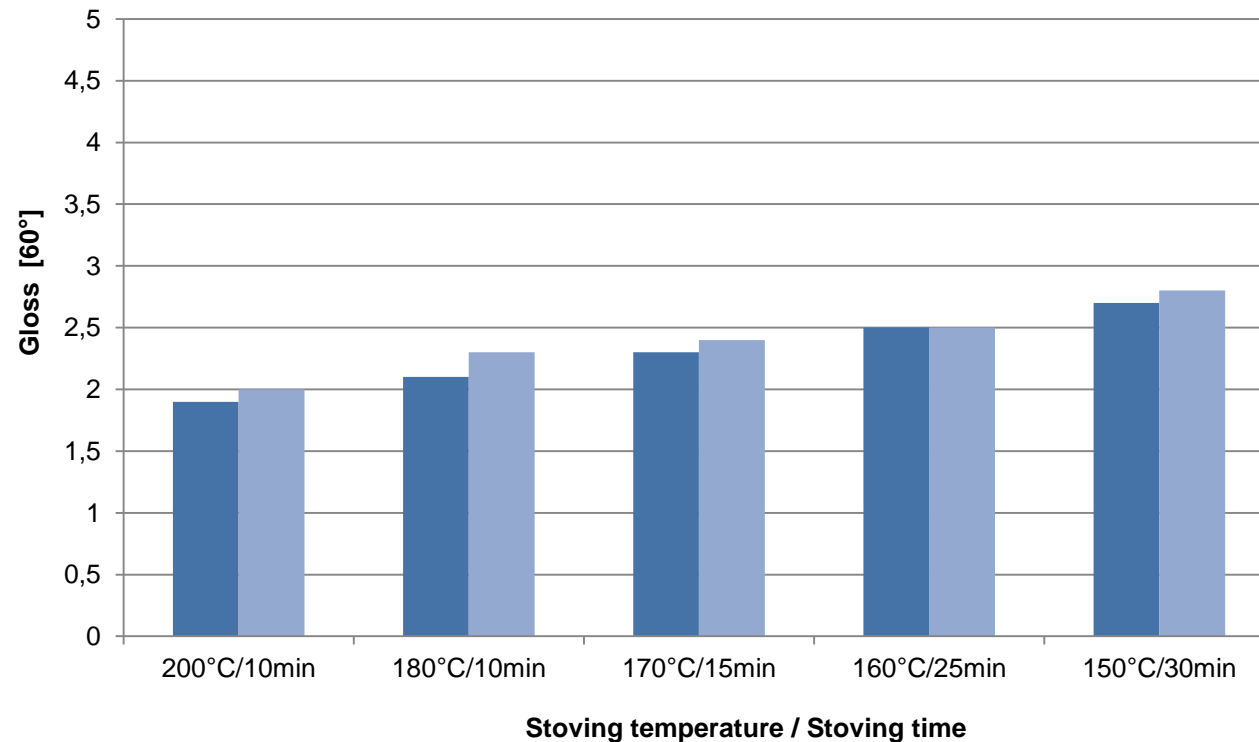


At the ECS Worlée presents two new powder coating products for low stoving temperature applications, the matting hardener Isocryl EP-581 LT and the catalyst Escat 66. Reduction of the baking temperature or shortening the baking time of powder coatings results in an energy saving effect, which is an important subject in the powder coating industry. Furthermore, a new flow control agent, Resiflow PL-330, will be introduced.

The glycidyl-functional matting hardener **Isocryl EP-581 LT** is designed to produce dead matt, exterior durable powder coatings with standard and superdurable polyester resins. Compared to conventional matting hardeners, which still need stoving temperatures of approx. 200°C for obtaining good mechanical values, powder coatings with Isocryl EP-581 LT can already be cured at approx. 160°C. A further advantage of Isocryl EP-581 LT is the very constant matt degree by multiple extrusions as well as within different stoving temperature in the range of 160°C to 200°C.

Polyester Powder Coating, dead matt, with Isocryl EP- 581 LT

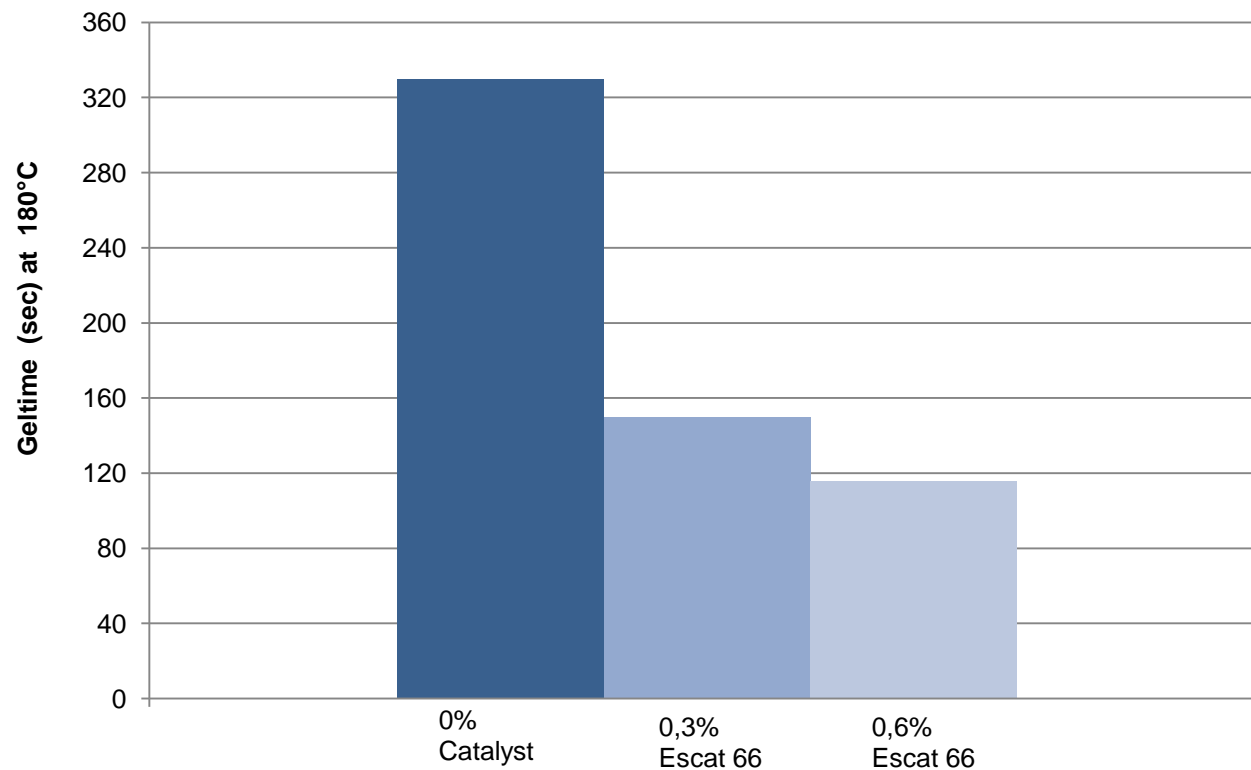


Grafic 1:
Isocryl EP-581 LT in Polyester Powder Coatings
Degree of gloss – stoving temperature / stoving time

- 8848-21: blue formulation
- 8848-22: green formulation

Escat 66 is an imidazole catalyst absorbed onto a silica carrier. Escat 66 is used to accelerate the cure of powder coatings, which are based on the reaction of an epoxy-functional resin or hardener with a carboxyl-functional resin. Typical systems are polyester/epoxy- and acrylic/epoxy-hybrids as well as polyester/TGIC- and polyester/glycidylester-powder coatings. The graphic annexed shows the influence of Escat 66 on the reactivity of an epoxy/polyester-powder coating by measuring the geltime. By addition of 0,6% Escat 66 the reaction time at 180°C can be shortened from 330s to 116s.

EP / PE - Powder Coating white, glossy



Grafic 2a (or Panels 2b):
Comparison Geltime with
0%, 0,3%, 0,6% Escat 66

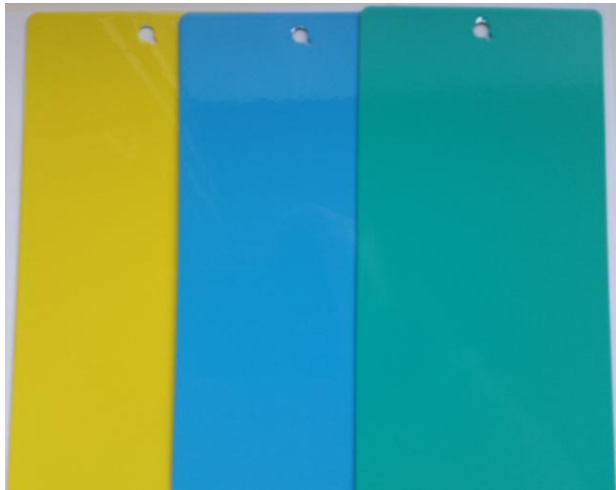
- 8848-01: 0% Catalyst
- 8848-04: 0,3% Escat 66
- 8848-05: 0,6% Escat 66



Panels 2b:
Comparison Geltime with
0%, 0,3%, 0,6% Escat 66

The flow control agent **Resiflow PL-330** is a further development within the Resiflow product range regarding improved cross product compatibility. Resiflow PL-330 offers enhanced robustness regarding contamination from powders based on superdurable polyester resins.

By incorporating 0,7-1,5% Resiflow PL-330 into powders, surface defects like orange peel, craters or pinholes can be reduced or eliminated. Additionally, powder coatings formulated with Resiflow PL-330 show lower Wave Scan values compared to standard flow control agents. This is an indication of a better and smoother levelling.



Panels 3a



Panels 3b

Comparison Wave Scan Reference FCA / Resiflow PL-330

