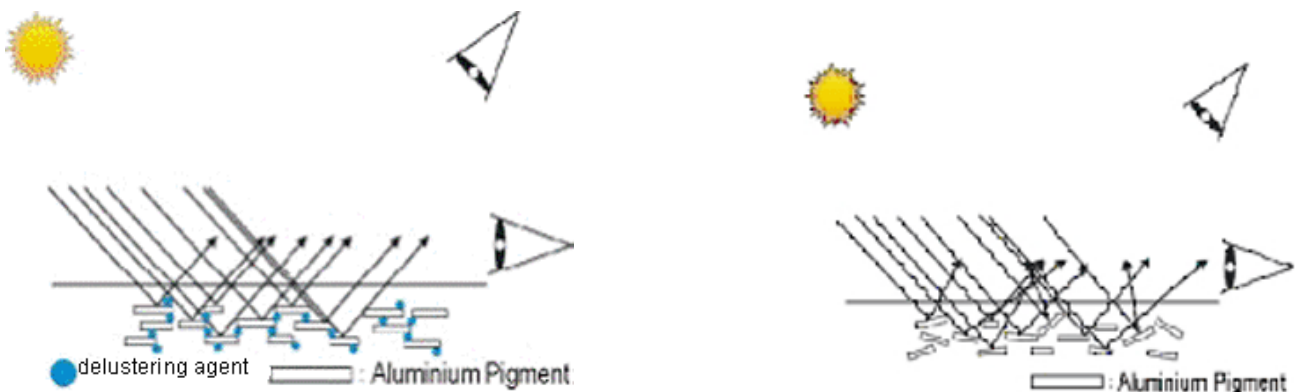


Influence on the orientation of Effect Pigments on the Flip-Flop Effects

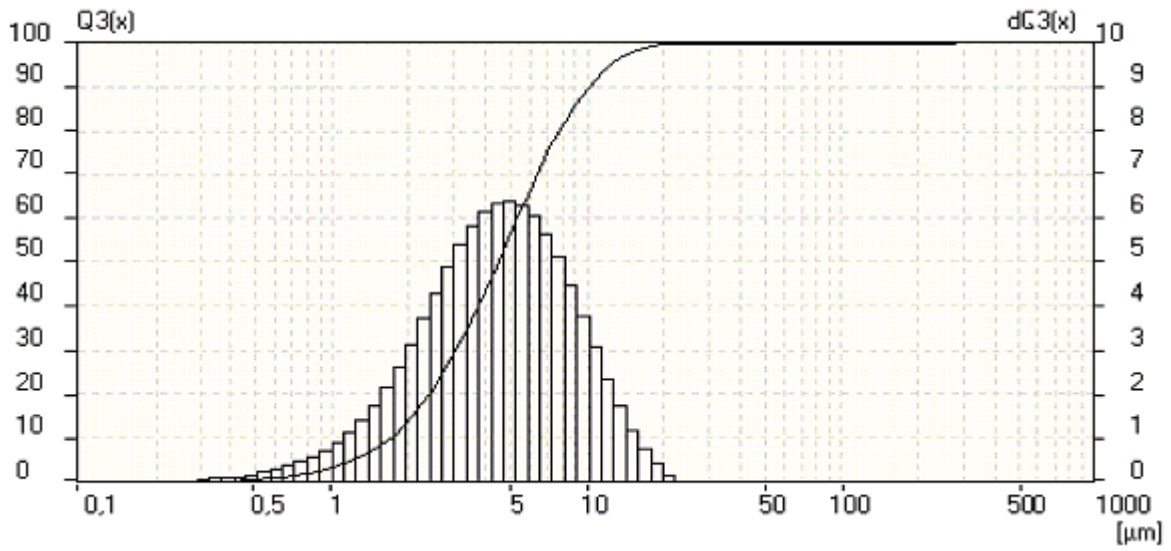
The trait of effect metal varnishes is brilliance and luminance of the varnishing. Special significance above this has the Flip-Flop or two tone effect, which results from the alteration of the luminance sensation during modification of the viewing angle. This effect depends on the utilized metal pigment and its adjustment in the varnish film.

The addition of certain additives fosters the mostly simply called “Flop” effect in metal effect varnishes. The dependency of the visual image of the metal effect varnishes is here substantially influenced by the used additive, respectively its particle diameter. Alternatively, products on a polymethyl urea resin basis can be used.

The presence of the fine polymer particles lead to a spatial separation of the single metal pigment palettes in the varnish layer and therefore to a targeted steering of the “Flop”. They exert inside the varnish a barrier effect and surround the present metal pigments with a flexible frame structure, so that they are constricted in their flexibility. Therewith an undesired approach of the particles is prevented and a more even brilliance – even with different viewing angles is achieved.



The dependency of the visual image of the metal effect varnishes is here substantially influenced by particle diameter of the used additive. The shown below distribution is an especially finely ground polymethyl urea resin, measured with an ANALYSETTE 22 COMPACT in an organic solution with a small volume dispersion unit.



Author: Dr. Günther Croll, Fritsch GmbH