



SAG CONTROL AGENT RESIN (SCA RESIN)

For the Automotive OEM & General Industry Paint

Introduction of SCA Resin

Sag Control Agent is also called as SCA. Sagging, it is a major problem in automotive OEM paint and some general industry paint due to higher film thickness at vertical position being a requisite in these applications. In the market there are a number of conventional anti-sagging agents available, such as silicates, wax, and organic clay and so on to adjust the rheology of the paint. However, these products result in negative effect on the gloss, transparency, also mechanical and chemical properties of paint film. Hyychem has developed different unique types of Sag Control Agent (called as SCA) to solve the above mentioned problems. For both melamine based baking paint and 2K PU paint, SCA is available.

Paint systems based on SCA resin can be characterized as follows:

- The rheology of paint is adjusted in such a way that sagging is prevented whilst the leveling of the system remains very good, no significant decrease in the solids content of the paint.
- In pigmented systems SCA prevents settling, flocculation and flooding.
- In metallic pigment system SCA can assist metallic flake orientation.
- In melamine based baking paints SCA is “built into” the film during baking, and as a result, the original SCA is not present in the cured film, cured film retains optimum gloss and transparency.
- No change in the properties of the paint film, i.e. solvent and chemical resistance and mechanical properties.



The High Efficiency SCA Resin

The content of the needle-shaped crystalline of the poly-urea in SCA resin is called as SCA active content, a very important index of the SCA resin, which determines the rheological character of SCA resin directly, moreover effects the result of anti-sagging in paint system, a high active content SCA resin results in a lower adding quantity of SCA resin if to acquire a same anti-sagging effect with low active content SCA resin. The SCA resin containing high active content means a high efficiency SCA resin. Producing high efficiency SCA resin is a great challenge, but Hyychem can provide high efficiency SCA resin with active content is 5-6%, so as the recommended quantity is only 50-70% to conventional SCA resin in the market, their active content is 2-3%. There is a comparison on a scanning electron micrograph between high efficiency SCA resin and conventional SCA resin. It shows clearly that the concentration of needle-shaped crystalline, active content, in high efficiency SCA resin is higher than that in conventional SCA resin.

It should be emphasized that although the poly-urea molecular structure and needle crystal of high-efficiency SCA resin are the same as those of traditional SCA resin, the recommended amount of high- efficiency SCA is lower.



SCA Catalogue

V.1.0

| Product Name | Appearance | N.V. % | SCA Content % | Binder System |
|--------------|-------------------|--------|---------------|-----------------|
| SCA 4380 | Milky White | 65.0 | 5.0 | Alkyd-Amino |
| SCA 3481 | Milky White | 50.0 | 5.0 | Acrylic-Amino |
| SCA 1177 | Milky White | 50.0 | 5.0 | Acrylic-Amino |
| SCA 0641 | Milky White | 50.0 | 5.0 | Acrylic-Amino |
| SCA 8530 | Milky White | 54.0 | 4.0 | Acrylic-Amino |
| SCA 8154 | Milky White | 60.0 | 2.5 | Acrylic-Amino |
| SCA 7737 | Milky White | 60.0 | 2.5 | Acrylic-Amino |
| SCA 5204 | Milky White | 50.0 | 5.0 | Polyester-Amino |
| SCA 5694 | Milky White | 50.0 | 5.0 | Polyester-Amino |
| SCA 5622 | Milky White | 50.0 | 4.5 | Polyester-Amino |
| SCA 5307 | Milky White | 53.0 | 3.3 | Polyester-Amino |
| SCA 8876 | Milky White | 50.0 | 4.5 | Acrylic-PU |
| SCA 9987 | Milky White | 60.0 | 2.5 | Acrylic-PU |
| SCA 6068 | Semi-Transparency | 55.0 | | Acrylic-PU |
| SCA 4307 | Semi-Transparency | 55.0 | | Acrylic-PU |
| SCA 7047 | Semi-Transparency | 60.0 | | Polyester-PU |
| SCA 6303 | Semi-Transparency | 60.0 | | Polyester-PU |
| SCA 8863 | Semi-Transparency | 65.0 | | Polyester-PU |
| SCA 6743 | Semi-Transparency | 60.0 | | Polyester-PU |