SYLOJET® A-Series and C-Series Submicron Silica Pigments for Ink-Jet Media and Functional Coatings

Unique silica pigments combining particle size below 1 micron with internal porosity
SYLOJET® A-Series and C-Series Submicron Silica Pigments

SYLOJET® A-Series and C-Series Submicron Silica Pigments are aqueous porous silica dispersions with silica particle sizes smaller than 1 micron. Due to the small particle size and internal porosity, the products are uniquely suited for smooth coating applications requiring surface absorption of higher liquid volumes while maintaining excellent optical density and print resolution.

Product Benefits

- Particle sizes below one micron allow smooth and semi-glossy coatings
- High liquid ink capacity from fine sized porous particles with high internal void space
- Silica’s refractive properties provide brilliant colors in ink-jet printing
- Reproducible layer structure possible through defined particle size and shape
- Greater control of ink dynamics provided by defined pore diameter, particle size and shape
- Tailored grades compatible with other common cationic or anionic recipe ingredients

Manufacturing Benefits

- Avoid handling of dusty powders
- Save the effort and cost to disperse and charge cationic pigment particles on site
- Lower drying demand and faster line speeds than previous SYLOJET® 700 series submicron silica pigment due to higher solids formulation

Silica Pigment Particles Sizes
Examples of Product Applications

- **Semi-gloss Ink-Jet Papers**
  - High speed ink-jet printing
  - Ink-Jet web presses
  - Hybrid printing

- **Photo-glossy Ink-Jet Media**
  - For highly adsorbent base layers

- **Direct Thermal Papers**
  - Protective, offset printable topcoats

- **Thermal Transfer Media**
  - In wax receptive coating

- **Functional Coatings**
  - Primers on film with improved liquid absorption

**Product Property Range**
Aqueous dispersion with cationic or anionic character

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Average Particle Size</td>
<td>μm</td>
<td>0.3 – 0.4</td>
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<tr>
<td>Solids Content</td>
<td>%</td>
<td>25 – 30</td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td>3 – 4 and 6.5 – 8.0</td>
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<tr>
<td>Specific Surface Area (N₂)</td>
<td>m²/g</td>
<td>150 to 200</td>
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<tr>
<td>Pore Volume</td>
<td>ml/g</td>
<td>&gt; 0.7</td>
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Grace Davison has successfully pre-registered all REACH relevant substances. The next step is the ongoing preparation of the required registration dossiers and final registration of our substances. Grace Davison has already fully registered its synthetic amorphous silica. This gives our customers the ultimate assurance of full REACH compliance and supply security beyond 2010.

Grace is a premier specialty chemical and materials company with more than 6000 employees located around the world. Our products are used by millions of people each day. Among many other things, we ensure the integrity of some of the world’s major buildings and bridges, enhance the performance of your petroleum products and preserve the safety of your food.