For over 70 years,

Silberline has been an industry leader in providing metallic pigments to the coatings market. Our industrial coatings portfolio is comprised of a broad range of grades of high performance metallic pigments designed for the unique needs of the industrial coatings industry.

STARBRITE, STARBRITE Reveal and STARBRITE Reveal AQ Vacuum Metallized Flake Pigments

Vacuum metallized pigments offer color stylists, formulators and applicators with the eye-catching effects demanded in the graphic arts and coatings industries. Silberline’s STARBRITE series provides formulators with different looks due to its exceptionally high surface area, aspect ratio and pigment thickness. This series ranges from the 2100 high whiteness product to the mid-range smooth, chrome-like metallic of the 4102 and 4172 series to the high coverage, ultimate mirror effect of 6108.

- **STARBRITE** The unique characteristics of STARBRITE offer high quality, consistent performance and a smooth and brilliant finish. Common applications include auto parts and accessories, wheels, automotive interiors, screen printing and solventborne industrial coatings.

- **STARBRITE Reveal** features broader solvent compatibility, and demonstrates good adhesion on problem substrates making it easier to use. It is ideal for reverse printing or coating for mirror-like effects. Common applications include spray coat or screen printing for electronics, auto parts and accessories, wheels, automotive interiors, labels, packaging and solventborne industrial coatings.

- **STARBRITE Reveal AQ** provides true liquid metal appearance in waterborne systems with good gassing stability, excellent opacity at low loading levels and easy dispersions in water, alcohols and glycol ethers. Common applications include waterborne industrial coatings, spray coatings, automotive finishes and interiors, wheels, auto parts, printing inks and cosmetic packaging.

### STARBRITE Series Pigment Characteristics

<table>
<thead>
<tr>
<th>Grade</th>
<th>Metal Content Percentage</th>
<th>Diameter (50%) Microns</th>
<th>Specific Gravity</th>
<th>Covering Power</th>
<th>Shade/Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2100EAC</td>
<td>10</td>
<td>10</td>
<td>0.96</td>
<td>Lowest</td>
<td>White, brushed metal</td>
</tr>
<tr>
<td>4102EAC</td>
<td>10</td>
<td>10</td>
<td>0.96</td>
<td>Mid-range</td>
<td>Very highly reflective, mid-shade</td>
</tr>
<tr>
<td>Reveal 4102EAC</td>
<td>10</td>
<td>12</td>
<td>0.96</td>
<td>Mid-range</td>
<td>Very highly reflective, mid-shade</td>
</tr>
<tr>
<td>Reveal AQ 4172-PA</td>
<td>10</td>
<td>12</td>
<td>0.91</td>
<td>Mid-range</td>
<td>Very highly reflective, mid-shade</td>
</tr>
<tr>
<td>Reveal AQ 4172-PM</td>
<td>17</td>
<td>12</td>
<td>1.03</td>
<td>Mid-range</td>
<td>Very highly reflective, mid-shade</td>
</tr>
<tr>
<td>5102EAC</td>
<td>10</td>
<td>12</td>
<td>0.96</td>
<td>High</td>
<td>Exceptionally highly reflective, near chrome-like</td>
</tr>
<tr>
<td>6108EAC</td>
<td>10</td>
<td>8</td>
<td>0.96</td>
<td>Highest</td>
<td>Ultimate reflectivity and chrome-like appearance</td>
</tr>
</tbody>
</table>

Shelf life–2 years
STARBRITE Reveal
Starting Point Formulations

In all cases dispersion with minimal shear minimizes flake damage and gives brighter, more consistent results.

Inks

- Typical solvent ink resins: Nitrocellulose, PVB, and Acrylic
- Total solids: <15%
- Pigment: Binder ratios 1:1 to 1:2

Maximizing the result

- Ensure that substrate is very smooth.
- Ensure printing method does not filter out the flakes.

Coatings

- Typical solvent coating resins: Acrylic, Urethane
- Dry film thickness: <10µm
- Pigment: Binder ratios 2:1 to 1:4

Maximizing the result

- Ensure substrate is very smooth and very coating receptive.
- Ensure application method allows smooth flow out or apply on the reverse for optimal mirror effect.
- Additives for flow and antifoaming must be checked to ensure that the appearance is not negatively affected.

STARBRITE Reveal AQ
Starting Point Formulations

In all cases dispersion with minimal shear minimizes flake damage and gives brighter, more consistent results. If excessive shear is used, flakes could be ruptured and gassing would result. Tests for gassing resistance in the finished formulations should be run.

Inks

- Typical aqueous ink system
- Total solids: <50%
- Pigment: Binder ratios 1:1 to 1:2

Maximizing the result

- Ensure that system is not too alkaline or acidic.
- Ensure substrate is very smooth and coating receptive.
- Ensure application method allows smooth flow out or apply on the reverse for optimal mirror effect.
- Additives for flow and antifoaming must be checked out to ensure that the appearance is not negatively affected.

Coatings

- Typical 1 K Acrylics
- Total solids: <50%
- Pigment: Binder ratios 0.5:1 to 1:1

Maximizing the result

- Ensure that system is not too alkaline or acidic.
- Ensure substrate is very smooth and coating receptive.
- Ensure application method allows smooth flow out or apply on the reverse for optimal mirror effect.
- Additives for flow and antifoaming must be checked to ensure that the appearance is not negatively affected.

Incorporation technique, application method, substrate and drying systems can all have a major effect on the results obtained with vacuum metallized flake materials. Silberline’s product application engineers and technical service teams can help you select the appropriate product grade, formulation or application technique for your specific process. By using high quality test methods and practices at Silberline’s advanced technical and manufacturing center, we can help customers solve their most challenging coatings problems.

Packaging

- 200 g sample
- 3 kg pails
- 20 kg pails
Global Reach

Silberline has been an industry leader for over 70 years providing metallic pigments and technical expertise to industrial customers around the world. Whether you need special effect or performance-enhancing products for automotive, industrial coatings, ink or plastics, contact The Architects of Light at your local office below or visit www.silberline.com.