Powder Coating Resins

Customizable Systems for Superdurable
High and Low Gloss Applications

www.synthomer.com
Superdurable for High Gloss Performance

<table>
<thead>
<tr>
<th>Resins</th>
<th>Technologies</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albeste 6150</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Cures at 95:5 ratio. Delivers superior exterior durability and considerably enhanced mechanical properties compared with standard superdurable resins.</td>
</tr>
<tr>
<td>Albeste 6181</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Cures at 95:5 ratio. Lends superior exterior durability and enhanced mechanical properties compared with standard superdurable resins.</td>
</tr>
<tr>
<td>Albecor 6190</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Designed for Low Temperature curing starting from 160 °C. It provides superior exterior durability together with improved mechanical properties compared to standard superdurable systems in 93:7 ratio. Good storage stability.</td>
</tr>
<tr>
<td>Albeste 6800</td>
<td>Polyglycidyl Esters</td>
<td>Superior exterior durability in 95:5 ratio with polyglycidyl esters.</td>
</tr>
<tr>
<td>Albeste 6140</td>
<td>Triglycidyl Isocyanurates (TGIC)</td>
<td>Lends superior exterior durability in 93:7 ratio with TGIC. Suitable for curing with B-HAA at 95:5 ratio.</td>
</tr>
</tbody>
</table>

Typical applications
- Architectural
- Automotive
- ACE machinery
- Transportation
- Heavy duty

Benefits of Albester Resins
- Superior outdoor resistance
- High and low gloss solutions
- Various technologies available
- Excellent quality consistency
- Low thermal cure options
- Improved flexibility
- Superior humidity resistance
- Meets GSB (Master)/Qualicoat Class 2

Superior Outdoor Durability, Whatever the Need
For architectural applications, long-lasting, high quality outdoor and mechanical performance meeting GSB and Qualicoat specifications is key. Albeste 6140 is designed to fulfill the most stringent Qualicoat and GSB requirements, including Superdurable, while still maintaining excellent flow, storage stability and consistency.

Albeste 6140
Albeste 6140 based brown coating (RAL 8014) Florida 5° direct south washed
- Albeste 6140
- Qualicoat Class 2 requirement

![Graph showing gloss retention over exposure time](image-url)
Albester and Albester SilkyMatt Superdurable Resins

25 Years of Experience, New Technologies for Evolving Challenges

After years of developing low gloss solutions for automotive powder coatings, Synthomer has expanded its range of superdurable polyesters to include new resins for high gloss and low temperature curing applications. Enhanced flexibility makes these new powder coatings suited for more demanding applications with stricter specifications. Low temperature curing resins, for example, can ensure that coatings cure properly, even under difficult conditions such as on heavy parts.

Synthomer’s superdurable range works with all existing powder coating technologies, from B-HAA to polyglycidyl ester, TGIC and isocyanate cured systems. It also includes resins for special purposes such as dye sublimation or antigraffiti applications.

A Superdurable, Low Temperature Cure Innovation

Albecor 6190 is a flexible, superdurable resin that cures for 15’ at 160 °C with B-HAA. This revolutionary new product further expands the Albecor™ LTC range, enabling powder coating producers to enter new markets.

- Curing 15’ at 160 °C (object temperature)
- Excellent flow
- Very Good flexibility
- Outdoor durable Qualicoat Class 2 and GSB Master
- Good storage stability
- Blooming free

Impact 25 kg.cm on chromate aluminum ALQ 36, brown

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% of gloss retention in QUV-B, white, 15’ at 160 °C

Impact 25 kg.cm on chromate aluminum ALQ 36, brown
Following the lead of architects and designers, Synthomer has developed a broad range of superdurable Albester SilkyMatt resins that lower the gloss, producing subtle, natural-looking finishes that tend to camouflage surface defects. Dry mixing two powder coatings with different structures and reactivities allows the formulation of coatings with specific performance attributes and levels of gloss.

The typical sparkling effect of dry-blended powder coatings can be controlled with additives or by adjusting the particle size distribution. Albester SilkyMatt systems can achieve a large range of gloss levels, from dead matte (below 5) up to 50 units of gloss. These resins are known for their consistent high quality and reproducibility. Other important features are their film flexibility, pigment wetting, and impressive outdoor durability.

### Synthomer’s Superdurable Dry Blends

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<tr>
<td>Albester SilkyMatt 6520/6580</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Outstanding outdoor durability and the lowest gloss. Suitable for Architectural / Automotive applications.</td>
</tr>
<tr>
<td>Albester SilkyMatt 6530/6580</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Specially suited to Automotive / Transportation applications, offering outstanding outdoor durability.</td>
</tr>
<tr>
<td>Albester SilkyMatt 6540/6580</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Improved water spot resistance. Outstanding outdoor durability.</td>
</tr>
<tr>
<td>Albester SilkyMatt 6550/6590</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Superlative water spot resistance, fulfilling the most stringent requirements.</td>
</tr>
<tr>
<td>Albester SilkyMatt 6530/6570</td>
<td>B-Hydroxy Alkyl Amide (B-HAA)</td>
<td>Imparts outstanding outdoor resistance and enhanced flexibility, compared with conventional superdurable dry blends. Specifically suitable for architectural applications.</td>
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### Outstanding Water Spot Resistance

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<th>Delta L</th>
<th>Delta C</th>
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<tr>
<td>Steel, 10° at 200 °C</td>
<td>Tested 4 hours at 60 °C according to GSB</td>
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Synthomer’s Superdurable Dry Blends Pass the Weathering Test

Florida 5° south exposure

- Standard durability
- Albester SilkyMatt 6520/6580
- Albester SilkyMatt 6530/6580
- Albester SilkyMatt 6540/6580

% of gloss retention

Exposure time [months]

20 40 60 80 100 120 140

0 10 20 30 40 50 60 70
Superdurable for Special Purpose Applications

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<tr>
<td>Albester SilkyMatt 6615/6620</td>
<td>Polyurethanes</td>
<td>PUR Superdurable “one shot” developed to meet Qualicoat Class 2 requirements. Outstanding weathering resistance compared with conventional one-shot systems. Used for automotive low gloss applications as well.</td>
</tr>
<tr>
<td>Albester 6310</td>
<td>Polyurethanes</td>
<td>PUR Superdurable resin for antigraffiti applications. Outstanding chemical resistance and improved outdoor resistance.</td>
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Synthomer is also the technical leader in polymers for the polyurethane “one shot” technique, in which two resins are perfectly combined in a single extruded powder coating, to obtain a customized level of low gloss. These systems are mainly devoted to dye sublimation technology and transportation applications. Synthomer accurate manufacturing processes, skilled personnel and cutting edge technology ensure Albester SilkyMatt polyesters an excellent level of quality and consistency.

Albester SilkyMatt 6615/6620

Albester SilkyMatt 6615/6620 based brown coating Florida 5° south exposure

Albester 6310 – Florida 5° Direct South Washed

- Albester 6310 RAL 9010 White
- Albester 6310 RAL 8014 Brown
Leading in emulsions and speciality polymers

Synthomer is one of the world’s leading suppliers of emulsion and speciality polymers supporting leadership positions in many market segments including coatings, construction, technical textiles, adhesives, paper and synthetic latex gloves. The company has its Head Office in London (UK) and provides customer focused services from operational centres in Harlow (UK), Marl (Germany), Kuala Lumpur (Malaysia), Shanghai (China) and Dubai (UAE). In June 2016 we have acquired the Monomers, Dispersions and Powders business (MDP) from Hexion with dedicated production, sales and customer service facilities in North America, Europe and South East Asia. In March 2017, we acquired the coalescing agents and Butyl Ethyl Propanediol (BE PD) business from Perstorp Oxo Belgium AB. The newly acquired businesses significantly improve our footprint to a number of speciality markets which we will continue to serve through a strong network of local technical service and sales branches, supported by regional application development and production in our key markets. We deliver the right formula, globally, individually.

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