PRIMIS® SAF 9000

Polymer Dispersions

PRIMIS® SAF 9000 is a very finely divided polymer dispersion of a special styrene/acrylic acid ester copolymer. PRIMIS® SAF 9000 is manufactured without coalescent, organic solvents, plasticizers or alkyl phenol ethoxylate (APEO) containing compounds.

The product is in the process of introduction into industrial use (Scale-up Product). Therefore the product data given are subject to change. Always consult WACKER POLYMERS about the product’s availability before using it for industrial purposes.

Properties

- Suitable for use as surface treatment or co-binder for architectural coatings
- Excellent penetration into porous substrates
- Formation of films with excellent hydrophobic and oil-resistant properties
- Improvement of cleanability (easy-to-clean) and mechanical properties
- Improvement of blocking resistance

Technical data

Specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Condition</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solids content</td>
<td>-</td>
<td>41 - 43 %</td>
<td>DIN EN ISO 3251</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Brookfield, spindle 1 / 20 rpm</td>
<td>50 - 500 mPa·s</td>
<td>DIN EN ISO 2555</td>
</tr>
<tr>
<td>pH</td>
<td>-</td>
<td>6.5 - 7.5</td>
<td>DIN/ISO 976</td>
</tr>
</tbody>
</table>
General Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Condition</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum film forming temperature</td>
<td>-</td>
<td>approx. 17 °C</td>
<td>DIN ISO 2115</td>
</tr>
<tr>
<td>Predominant particle size</td>
<td>-</td>
<td>approx. 70 nm</td>
<td>specific method</td>
</tr>
<tr>
<td>Protective colloid / emulsifier system</td>
<td>-</td>
<td>surface active emulsifiers</td>
<td>-</td>
</tr>
<tr>
<td>Appearance of the dispersion film</td>
<td>-</td>
<td>glossy</td>
<td>Visual</td>
</tr>
<tr>
<td>Glass transition temperature</td>
<td>-</td>
<td>approx. 21 °C</td>
<td>specific method</td>
</tr>
<tr>
<td>Compatibility with cement</td>
<td>-</td>
<td>incompatible</td>
<td>specific method</td>
</tr>
</tbody>
</table>

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product’s fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties’ rights.

Applications

- Primer
- Interior Paints
- Ready-to-use dispersion-based Renders & Plaster
- Surface Treatment
- Exterior Paints

Application details

Its extremely fine particle size allows PRIMIS® SAF 9000 to penetrate into porous surfaces very well, thereby reinforcing the substrate. Surfaces treated with PRIMIS® SAF 9000 exhibit improved tensile adhesion strength and scrub resistance. The unique polymer composition of the dispersion results in films that are stain-resistant against aqueous and oily dirt, making surfaces treated with PRIMIS® SAF 9000 easier to clean as well as improving their mechanical properties. PRIMIS® SAF 9000 can be used both for Construction as well as Paints & Coatings applications.

In Construction PRIMIS® SAF 9000 is particularly suitable for producing impregnation and protective treatments for mineral-based substrates such as concrete, decorative self-leveling flooring compounds, natural stone and gypsum. The dispersion is also suitable for treating mineral plasters, roofing tiles, wood, fibers and nonwovens. Furthermore, PRIMIS® SAF 9000 can be used as a primer for treating substrates before applying screeds and floor leveling compounds.

For Paints & Coatings PRIMIS® SAF 9000 can be used as a film-forming polymer dispersion ideally suitable for colored marble chip plasters. As co-binder for high performance interior and exterior paints and plasters PRIMIS® SAF 9000 is effective in order to improve of blocking resistance and to increase stain resistance. Paints formulated with PRIMIS® SAF 9000 reduce snail excretion (surfactant bleaching) on walls.

Processing

PRIMIS® SAF 9000 is highly compatible with polymer dispersions such as VAE, styrene acrylics and pure acrylics. 10 – 20 % PRIMIS® SAF 9000 on total binder is recommended when used as a co-binder.
PRIMIS® SAF 9000 exhibits excellent shear stability and is highly compatible with silicone and wax emulsions, as well as with other polymer dispersions such as styrene/acrylate, vinyl acetate and PU. If the product is used to impregnate porous substrates, we recommend diluting the dispersion to a solids content of 5 – 30%, depending on how absorbent the substrate is. The product can be applied by brushing, rolling, spraying or wiping. For best results, apply the product in two coats using a short-pile velour mop. Film-forming aids: PRIMIS® SAF 9000 is made without the addition of film-forming agents, organic solvents or plasticizers, and forms films at temperatures above 13 °C. Forming films at lower temperatures requires the addition of film-forming agents.

Additional information

If the product is used in applications other than those mentioned, the choice, processing and use of the product is the sole responsibility of the purchaser. All legal and other regulations must be complied with. For questions concerning food contact status according the chapter 21 CFR (US FDA) and German BfR, please feel free to contact us.

Wacker Chemie AG Hanns-Seidel-Platz 4 D-81737 München Germany

Packaging and storage

Packaging

Non-returnable containers of 1 t capacity and road tankers. Please contact your WACKER customer representative for further possible packaging units.

Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. PRIMIS® SAF 9000 has a shelf life of 6 months starting from the date of receipt if stored in the original, unopened containers at temperatures between 5 and 30 °C. Iron or galvanized-iron equipment and containers are not recommended. Therefore the use of containers and equipment made of ceramics, rubberized or enameled materials, appropriately finished stainless steel, or plastic (e.g. rigid PVC, polyethylene or polyester resin) is recommended. As polymer dispersions may tend to superficial film formation, skins or lumps may form during storage or transportation. Filtration is therefore recommended prior to utilization of the product.

Preservation for transport, storage and further processing

PRIMIS® SAF 9000 is adequately preserved during transportation and storage if kept in the original, unopened containers. However, if it is transferred to storage tanks, the dispersion should be protected against microbial attack by adding a suitable preservative package. Measures should also be taken to ensure cleanliness of the tanks. In unstirred tanks, a layer of preservative-containing water should be sprayed onto the surface of the dispersion to prevent the formation of unwanted skin and possible attack by microorganisms. The thickness of this water layer should be < 5 mm for low viscosity dispersions and up to 10–20 mm for high viscosity products. Measures should be taken to ensure that only bacteria-free air enters the tank when the dispersion is removed. Finished products manufactured from polymer dispersions usually also require preservation. The type and scope of preservation will depend on the raw materials used and the anticipated sources of contamination. The compatibility with other components and the efficacy of the preservative should always be tested in the respective formulation. Preservative manufacturers will be able to advise you about the type and dosage of preservative required.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER sales offices or may be printed via WACKER web site www.wacker.com.
For technical, quality or product safety questions, please contact:

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info@wacker.com, www.wacker.com

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