

# Acronal<sup>®</sup> 5400

## Polymer Dispersions for Construction

### Chemical nature

Aqueous dispersion of acrylic acid ester and styrene; Acronal<sup>®</sup> 5400 is manufactured without APEO, and ammonia and plasticizer.

Type of dispersion: Anionic

## Properties

### Physical form

Liquid

### Technical data

(not supply specification)

|  |                                     |                |
|--|-------------------------------------|----------------|
| Solid content                                  | DIN EN ISO 3251                     | 56.0 – 58.0 %  |
| pH value                                       | DIN ISO 976                         | 5.5 – 7.5      |
| Viscosity, dynamic                             | DIN EN ISO 3219<br>(250 1/s, 23 °C) | 50 – 350 mPa.s |
| Glass transition temperature (T <sub>g</sub> ) |                                     | ~ -8 °C        |
| MFFT   | DIN ISO 2115                        | < 1 °C         |
| Initial melting point <sup>1</sup>             |                                     | ≤ 20 °C        |

<sup>1</sup> According to Commission Regulation (EU) 2023/2055 of 25 September 2023 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards synthetic polymer microparticles.

The initial melting point was determined according to the position paper of the European Polymer Dispersion and Latex Association (EPDLA's position paper on polymer dispersions, redispersible polymer powders made thereof and synthetic polymer microparticles) from December 2024 and the method described therein.

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## Application

### Areas of application

Acronal® 5400 is mainly used to manufacture cement-based, flexible waterproofing membranes being applied in- and outdoor beneath tiles with good crack-bridging properties.

#### Other areas of application include for example:

- High-flexibility tile adhesives
- Flexible waterproofing slurries for sealing in conjunction with tiles and protective surface coatings
- Protection against corrosion
- Basecoats
- Additive for hydraulic binder systems
- Roof coverings

### Processing

It is usually not necessary to add any plasticizer, because Acronal® 5400 already has low film-forming and glass transition temperatures. If the air voids content increases during processing of Acronal® 5400, we suggest defoaming tests with, for example, 0.3 – 1.0 % FoamStar® PB 2706 in relation to the wet component.

To ensure the crack-bridging properties of mineral waterproofing slurries, the polymer/cement ratio should be at least 0.9. If a sag-resistant consistency is required for the processing rheology of the slurry, we recommend the use of polyurethane-based thickeners like, for example, Rheovis® PU 1216.

To speed up hydraulic formulations with a high proportion of polymer, it may be beneficial to add aluminous cement or calcium formate to the dry component.

### Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

### Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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BASF SE  
Regional Business Unit  
Dispersions Europe  
67056 Ludwigshafen, Germany

[www.basf.com/dispersions](http://www.basf.com/dispersions)