OSAKRYL® OSA A

Water dispersion of
styrene-acrylic copolymer

Technical Data Sheet
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Approved by: Product Manager – Dominika Słotwińska

Previous editions of this document have lost their validity

CHARACTERISTICS

Osakryl® OSA A is a water dispersion of styrene-acrylic copolymer produced in the presence of emulsifying system composed of ionic and non-ionic surface active agents. Product is designed for the formulation of sealants, putties and flexible fillers.

GENERAL PROPERTIES

- APEO free
- free of solvents
- very good elasticity
- resistance to alkalis

In coatings exhibit very good adhesion to various porous materials, especially cement, cement-limestone, etc.

BASIC PARAMETERS

Parameters	Units	Values	Test methods
pH	-	4,0÷6,0	PN-EN 1245
solids content	%	49±1	PN-EN 827
viscosity by Brookfield RVT[1)]	mPa·s	10000÷20000	PN-ISO 2555
MFFT (minimal film forming temperature)	°C	ca. 0	PN-90/C-89415
Tg (glass transition)	°C	-2÷0	differential scanning calorimetry (DSC)
mean particle size	nm	110÷130	photon correlation spectroscopy (PCS)

[1)] rotors per minute: 20; rotor nr 5; temperature: 23ºC; after 5 minutes

APPLICATON

Osakryl® OSA A is a water dispersion of styrene-acrylic copolymer produced in the presence of emulsifying system composed of ionic and non-ionic surface active agents. Product is designed for the formulation of sealants, putties and flexible fillers.

Dispersing agents

According to our test results the best stability and good mechanical parameters show products based on Osakryl® OSA A with 0,1-0,2% by weight of Polifos as a wetting agent and 0,3-0,5% by weight of following dispersing agents: Hydropalat 1080, Metolat 514, Hydropalat 5040, Dispersene-P/80.

Defoamers

The best defoaming effect in high-filled systems based on Osakryl® OSA A can be achieved with 0,2% by weight of BYK 037 or Foamaster 50. In primers and low-filled systems addition of 0,2% by weight of Dehydran SE 1 is recommended. For surface defects prevention such as catering problem 0,05-0,1% by weight of Dehydran 1293 can be used.

Rheology modifiers and thickeners

Osakryl® OSA A can be used with all available cellulosic thickeners designed for water-based products formulation. The best results can be obtained in formulations based on Osakryl® OSA A and Bermocoll, Tylose or Natrosol. The

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addition of xanthan gum e.g. Agocel V 500D and guar gum e.g. Agocel I 110D or Agocel I 115D is also recommended. Very good results can be achieved with Tafigel AP acrylic thickener or DSX 1516 and DSX 3290 polyurethane thickeners.

Coalescing agents

Due to the fact that Osakryl® OSA A forms film in the temperature above 0°C it is not necessary to add coalescing agents in the formulation. In order to improve some film forming properties Texanol can be used.

Fillers

Osakryl® OSA A is well miscible with all mineral fillers. Very good whiteness and hiding power parameters can be obtained using Omyacarb 5VA and Omyacarb 2VA. For increasing whiteness and hiding power addition of precipitated aluminium and sodium silicate Sodasil P95 is recommended. Hiding power improvement can be achieved with the addition of Chinafill 830 or Dorkafil H. Mika SG or wollastonite Tremin 939-300 AST are recommended for products with increased wet scrubbing resistance.

Biocides

Osakryl® OSA A is protected against microbiological contamination. For final products based on Osakryl® OSA A protection “in can” we recommend addition of Preventol D8, Mirecide-M/90 or Acticide MBS. Sufficient dry film protection can be achieved with Preventol A14D, Mirecide-TF/458 or Mirecide-TF/495 ECO.

Other additives

For open-time prolongation in products based on Osakryl® OSA A we recommend addition of Ombrelub 730 or Loxanol DPN. For hydrophobization of products based on Osakryl® OSA A we recommend addition of Agochem HP 105, Agochem HP 120 or Dow Corning IE2404. For additional plasticizing effect in products based on Osakryl® OSA A we recommend addition of plasticizer e.g. Benzoflex LC-531 or Acetine TP LXS 51035.

PACKAGE AND TRANSPORTATION

Acid resistant and heat insulated road tankers, IBC plastic containers or plastic drums with polyethylene bags inside. Package and transportation are not subject to regulations for hazardous materials transportation (ADR, RID). The other packages can also be used if previously agreed between the producer and a customer. Package must not deteriorate the product.

STORAGE

Store at temperature range from 5 to 35°C. Drums should be stored in one layer. If stored in these conditions the product does not change its properties in the period of six (6) months from the date of production.