We create chemistry

Acronal® 296 D na

Chemical Nature **Aqueous butyl acrylate-styrene copolymer dispersion used to produce all types of adhesives, coatings, textured finishes, and surfacing compounds**

Properties

Typical Properties	Solids content, weight	%	49.0 – 51.0
	pH		7.5 – 8.5
	Viscosity at 23 °C	mPa s	6000 – 8500
	(Brookfield RV and Helipath Stand, Spindle TA, at 20 rpm)		
Other properties of the dispersion	Density	lbs/gal	ca. 8.66
		g/cm³	ca. 1.04
	Average particle size	µm	ca. 0.1
	Film-forming temperature	°F	ca. 68 min.
		°C	ca. 20
	Dispersion type		anionic
	Plasticizer content		free from plasticizer
	Filler/pigment acceptance		very good
	Sensitivity to frost	°F	below 32
		°C	below 0
Properties of the film	Density	g/cm³	ca. 1.08
	Glass transition temperature (DSC)	°C	ca. 22
	Water absorption	%	ca. 10
	(After 24 hours immersion in water)		
	Mechanical strength*		
	Tensile strength	psi	ca. 1000
		N/mm²	ca. 7
	Elongation at break	%	ca. 500
	Appearance		clear, transparent
	Surface		tack free
	Flexibility		good
	Resistance to aging		good

*These figures should be taken for comparison purposes only. They furnish only a rough comparison of film strengths.

Compatible with

Polymer dispersions Acronal 296 D na is miscible with nonionic and anionic mixtures with poly(vinylester) dispersions, but the films of mixtures with poly(vinylester) dispersions generally become cloudy. The product has excellent properties, and advantages are seldom obtained by mixing it with other dispersions.

Thickeners Rheovis® AS 1125 NA, Rheovis® AS 1420, polyvinyl alcohol, cellulose ether

Coalescents Methylbenzyl alcohol; Lusolvan® FBH; butyldiglycol; butyldiglycol acetate; mineral spirit containing aromatic hydrocarbons; pine oil. Ethylene and propylene glycol ethers, Texanol®, and Loxanol® brand non-VOC film formers.

Fillers

Amorphous and crystalline calcium carbonate, dolomite, silica flour, fine sand, etc. The good compatibility of Acronal 296 D na with pigments and fillers can be further improved by adding Pigment Disperser A or N if necessary in conjunction with sodium polyphosphate. The made-up compounds can be tinted, for instance, with our water-dispersible Luconyl® preparations (inorganic and organic pigments).

Application

Fields of application

Acronal 296 D na is used for producing high-gloss to flat coatings for application on plaster, masonry, fibrous cement, concrete, and other indoor and outdoor substrates. Moreover, its high pigment binding capacity makes Acronal 296 D na an ideal candidate for textured coatings and masonry paints. The high pigment binding capacity allows Acronal 296 D na to replace vinyl acrylics in many applications with improved performance at the same formulated cost.

Processing

Coatings are generally produced in high-speed mixers (e.g., dissolvers) by predispersing the filler/pigment mixture, incorporating the auxiliaries, and adding the dispersion as the last component. However, the high shear stability of Acronal 296 D na enables the latex to be used as a part of the grind base, thereby freeing water in the formulation.

In any case, it is necessary to disperse the fillers and pigments with sufficient wetting and dispersing agents (Dispex® AA 4030 Dispex® AA 4135 NA, or water-soluble phosphates, etc.) in order to obtain products with adequate storage stability.

The film-forming temperature of Acronal 296 D na can be reduced even further by adding solvents: for instance, Texanol, Butyl Carbitol, Butyl Cellosolve, and similar materials.

Lower alcohols and glycols improve the resistance to frost, but generally do not reduce the film-forming temperature.

A thickening agent must generally be added for adjusting the viscosity of the end product. Rheovis® AS 1420, Rheovis® AS 1125 NA, cellulose ether or other mineral thickening agents can be used for this purpose. These products not only increase the yield point, but also impart more or less pronounced pseudoplasticity to the end products. If Newtonian flow and good spreading properties are required, it is necessary to add a thickener based on polyurethane in conjunction with aqueous water-miscible film-forming auxiliaries.

In common with all dispersions of small particle size, Acronal 296 D na has a tendency to foam, and it is generally necessary to add a conventional defoamer in proportions of 0.3-1%.

Products containing Acronal 296 D na should be blended with a preservative in order to protect them from the attack of microorganisms. The suitability of the preservative must be determined by trials and regular inspections.

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Acronal 296 D na.

Storage

Storage should be in accordance with the “Handling and Storage of polymer dispersions” brochure. Technical information regarding the storage of BASF polymer dispersion products is available upon request.

Important

The descriptions, designs, and data contained herein are presented for your guidance only. Because there are many factors under your control which may affect processing or application/use it is necessary for you to make appropriate tests to determine whether the product is suitable for your particular purpose prior to use. **NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, OR DATA MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, DATA OR DESIGNS PROVIDED BE PRESUMED TO BE A PART OF OUR TERMS AND CONDITIONS OF SALE**. Further, you expressly understand and agree that the descriptions, designs, and data furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for same or results obtained from use thereof, all such being given to you and accepted by you at your risk.

Responsible Care®
Good Chemistry at Work

BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico.
For more information on Responsible Care® go to:
U.S.: www.basf.us/responsiblecare_usa
Canada: www.basf.us/responsiblecare_canada
México: www.basf.us/responsiblecare_mexico

BASF Corporation
Dispersions and Resins
11501 Steele Creek Road
Charlotte, North Carolina 28273
Phone: (800) 251 – 0612
Email: DispersionsPigmentsCC@basf.com
Email: edtech-info@basf.com
www.basf.us/formulation-additives