

WE MAKE THE PALETTE FOR PAPER



BHAVI International Private Limited

Government Recognized Export House | Formerly Bhavi International Limited



A Government of India Recognized Export House

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PRODUCT NAME : AC-800

Chemical Nature :

Aqueous anionic dispersion of copolymer of acrylate.

Physical form :

Milky White Liquid

Storage :

Acrylic polymer AC-800 has a shelf life of 12 months. The air in the headspace of bulk storage tanks must be kept saturated with water vapor at all times

Charateristics :

AC-800 is an high effective alkaline-swellable acrylic copolymer emulsion.

It can provide the paper coating industry with a convenient replacement for CMC or starch.

Its high water retention property makes it useful for addition to high-solids coating formulations containing latex as the principal binder. It can be added directly to the coating colors at the last stage and thickening is accomplished by basic condition like ammonia water (pH : 8-9.5).

Applications :

- Art Paper (Gloss paper)
- LWC (light weight coated paper)
- Board Paper

Properties

- Excellent Water Retention
- Good Rheological Properties
- Good Printability

Technical Specification

	SPECIFICATION	Unit	Low limit	Upper limit
1	Non-volatile fraction(at150°C/1hr)	%	29.0	31.0
2	pH(at 25°C)		2.0	4.0
3	Viscosity(Rvt#2, 50rpm)	Cps	0	100
4	Specific Gravity(at 25°C)	g/cm	1.01	1.08
5	Average Particle size	nm	100	150
6	Ionic charge		Anionic	
7	Application		Thickener for paper coating	

Comparison of rheological properties of different modifiers are as follows.

	10 rpm	20 rpm	50 rpm	shear thinning factor
Sterocol FD	9400	7300	5080	69.6 %
Lamberti L30	10000	7200	4880	67.8 %
JT-35B	1700	1600	1410	88.1 %
AC-700	4100	3650	3160	86.6 %
AC-800	8000	7400	6760	91.4 %

- The viscosity checked by Brookfield viscometer with a formulation of (thickener 70 / water 140 / ammonia 5).

- Shear thinning factor is the ratio of viscosity at 50 rpm with respect to 20 rpm. Higher number means the coating color has Newtonian like properties.

The method to check the water retention usually executed in static method (very low shear rate region).

In low shear rate region, Sterocol FD or Lamberti L30 has higher viscosity (Higher water retention value will be present).

But the recent paper coating process (mostly blade coating) has a shear rate range over 10^6 s^{-1} (Much higher shear rate region than Brookfield viscometer), and in that region our AC-800 is more effective to enhance the viscosity. In real situation on the coating process, it is important to maintain high viscosity just after coating on base paper to prevent migration of binder particles into the base paper, which is the main cause of the print mottling..