



RHOPLEX™ N-495 Emulsion
 Polyvinyl Alcohol Stabilized Acrylic Copolymer Emulsion

Regional Product Availability

- North America

Description

RHOPLEX™ N-495 Emulsion is an acrylic copolymer designed specifically as a base for adhesives. As supplied, this unique acrylic emulsion exhibits controlled rheological behavior. This enables the adhesives formulator to obtain predictable flow properties, such as uniform adhesive deposition and a controlled glue line on high-speed, high-shear laminating machinery. In addition, RHOPLEX N- 495 Emulsion has excellent "wet-grab."

Typical Applications

The versatile adhesion shown by RHOPLEX™ N-495 Emulsion suggests utility in a wide variety of adhesives when used as the base emulsion or as a compounding material.

Key Features

With RHOPLEX™ N-495 Emulsion, the adhesives compounder benefits from the adhesion versatility of an acrylic, controlled rheology, fast water release and "wet-grab," all with one polymer.

- **Rheology: Viscosity/Shear Relationship**
 RHOPLEX N-495 Emulsion was designed to have minimal variations in viscosity over a relatively wide range of high-shear conditions as may be encountered on modern coating and laminating equipment. Unlike conventional acrylic emulsions, the viscosity of RHOPLEX N-495 Emulsion varies in the narrow range of 300 to 500 cps, under shear rates ranging from 1,000 seconds⁻¹ to 9,000 seconds⁻¹ when determined on a Hercules High Shear Viscometer. These shear rates approximate the conditions encountered with many application methods.
- **Web-Grab:**
 With high-speed laminating equipment, the bonded items often cannot be mechanically retained until partial drying occurs. Under these conditions, the wet adhesive must be capable of withstanding certain short-term tensile and shear forces that act to cause delamination. Since test methods for this particular polymer characteristic differ widely and are, for the most part, subjective in nature, no data for RHOPLEX N-495 Emulsion are given. The relatively fast water-release time and quick rate of set demonstrated by RHOPLEX N-495 Emulsion supplement the inherent "web-grab" of this polymer.

Typical Physical Properties

(These properties are typical but do not constitute specifications.)

Property	Value
Polymer Type	Acrylic
Appearance	Milky white
Solids, %	58
pH	4.5
Brookfield LVF Viscosity, cps (#4 spindle, 60 RPM @ 25°C)	2500
Density: lbs/US gal gm/ml	9.0 1.08
Tg, °C	-4
Particls Charge	Anionic
Freeze/Thaw Stability	Protect from freezing
Rate of set ¹	30 seconds

¹Time to fiber tear using 1.5 mil adhesives in a 50 lb kraft-to-kraft lamination

Food Legislation

RHOPLEX™ N-495 Emulsion:

FDA Regulation	Complies	Limitations	Opinion Date
21CFR175.105 (Adhesives)	Y		01/17/2008
21CFR176.170 (Components of paper and paperboard in contact with aqueous and fatty foods)	L	▪ PROVIDED THAT THE FOOD CONTACT SURFACE OF THE PAPER AND PAPERBOARD COMPLIES WITH THE EXTRACTIVES LIMITATIONS IN 21CFR176.170 PARAGRAPH (C).	01/17/2008
21CFR176.180 (Components of paper and paperboard in contact with dry food)	Y		01/17/2008

Regulations may vary by city, state, country, or geographic region. Please contact the Dow Customer Service Group in your region for any additional, relevant regulatory information.

*Provided the food contact surface of the paper and paperboard complies with the extractives limitations prescribed in Paragraph (c) of 21CFR 176.170.

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