



**VINAVIL**<sup>®</sup>

Your Partner in Polymers



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# VINAVIL® in the Americas

VINAVIL has a strong technological heritage in the research and development of polymers used in the chemical industry. This cutting-edge company has served its customers well through product innovation that shows care for the environment. VINAVIL's core strategy encompasses the continuous improvement of existing products and the development of new polymers for coatings, adhesives, textiles, construction and other specialty applications.

The growth of the company is based on strong intensive research and development, an effective and empowered commercial sales team, and state-of-the-art customer service geared to achieving total customer satisfaction.

VINAVIL first began its operations by manufacturing chemicals in Italy in the 1920s. Starting its VINAVIL Americas operation in 1994, VINAVIL has become one of the world's most important manufacturers of polymers. With the addition of the company's production sites in the Americas – West Chicago in the United States and Montreal in Canada – and with around 100 years of Research & Development experience in the field of specialty chemicals, VINAVIL now has become a truly global company that is constantly strengthening its position as a reliable and responsible industry partner.

When it comes to the science of polymers, VINAVIL is the company to look to.

## Headquarters of the Americas

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## Manufacturing Facilities in the Americas

### **USA**

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### **CANADA**

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# Corporate Values & Quality

**VINAVIL** is committed to maintaining growth while adhering to the following principles:

- To develop a long-lasting partnership with customers, placing particular emphasis on quality.
- To work for the satisfaction of both customers and suppliers through clear and direct systems of communication.
- To encourage continued employee development by rewarding creativity, commitment and achievement, while delegating responsibility at every level of the organization.
- To respect the environment, pursuing a pattern of sustainable growth, and in strict observance of environmental laws in each country of operation.
- To guarantee profit levels that ensure continued growth, security of employees and satisfaction of shareholders.
- VINAVIL is an ISO 9001-certified company, and is currently pursuing ISO 14001 certification.



PLANT IN WEST CHICAGO, IL, USA

# Products & Applications

## Emulsions for Coatings

Vinyl acetate homopolymers, vinyl versatate copolymers, vinyl acetate copolymers, ethylene copolymers and acrylic copolymers

## Emulsions for Adhesives

Vinyl acetate homopolymers, vinyl acetate copolymers and ethylene copolymers for paper, cardboard and wood

## Emulsions for Textiles

Self-crosslinkable homopolymers, copolymers and ethylene copolymers

## Food-Grade Polymers

Bulk and flakes vinyl acetate homopolymers and vinylmaleate copolymers for the cheese industry and the gum base industry

## Solid Polymers

Beads of vinyl acetate homopolymers for solvent-based and extruded adhesives

## Redispersible Powders

Vinyl acetate homopolymers and copolymers for the building industry

ADHESIVES



COATINGS



FOOD



CONSTRUCTION



TEXTILES



# Products Index

## EMULSIONS

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# PVAc Homopolymers Modified PVAc Polymers

## PVAc HOMOPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 2154L	55	3,500	4.5	+14	1.1	> 1.0	Polyvinyl alcohol
VINAVIL 2155L	55	5,000	4.5	+14	1.09	> 1.0	Polyvinyl alcohol
VINAVIL 2155LB	55	3,000	5	+14	1.09	> 1.0	Polyvinyl alcohol
VINAVIL 2164L	63	3,500	4.5	+12	1.2	0.3 - 0.7	Dextrin
VINAVIL 2164LB	63	850	4.5	+12	1.2	0.3 - 0.7	Dextrin
VINAVIL SA	52	2,500	4.5	+15	1.1	0.6	Cellulose derivative

## MODIFIED PVAc POLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 2250L	50	2,000	2.5	+4	1.07	1.8	Polyvinyl alcohol
VINAVIL 2252L	52	5,000	2.5	+4	1.09	1.8	Polyvinyl alcohol
VINAVIL 2252M	52	15,000	2.5	+5	1.09	1.7	Polyvinyl alcohol
VINAVIL 2256L	48	7,000	3	+6	1.1	1.9	Polyvinyl alcohol
VINAVIL 2351L	52	1,500	4.5	+7	1.09	0.9	Polyvinyl alcohol



## PVAc Homopolymers Modified PVAc Polymers

■ MAIN USES    ■ POSSIBLE USES

Wood Adhesives	Paper Adhesives	Building (adhesives, construction and plasters)	Textile Finishings and Primers	Paints and Coatings	Textile Lamination	Product Name
■	■	■		■	■	VINAVIL 2154L
■	■	■		■	■	VINAVIL 2155L
■	■	■		■	■	VINAVIL 2155LB
	■					VINAVIL 2164L
	■					VINAVIL 2164LB
	■		■	■	■	VINAVIL SA

■ MAIN USES    ■ POSSIBLE USES

Wood Adhesives	Paper Adhesives	Building (adhesives, construction and plasters)	Creep-Resistant Adhesives	Product Name
■				VINAVIL 2250L
■		■	■	VINAVIL 2252L
■		■	■	VINAVIL 2252M
■				VINAVIL 2256L
	■	■		VINAVIL 2351L

# Vinyl Acetate / Vinyl Versatate Copolymers

## Veova™ Copolymers

### Vinyl Acetate / Vinyl Acrylic Copolymers

## VINYL ACETATE / VINYL VERSATATE COPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Tg (°C)	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 03V	51	3,500	4.5	+26	+5	1.05	0.2	Anionic/Non-ionic
VINAVIL 3525	55	500	5	+25	+14	1.06	> 1	Polyvinyl alcohol
RAVEMUL T33	55	3,000	4.5	+34	+12	1.1	0.8	Anionic/Non-ionic
RAVEMUL T37	50	1,000	4.5	+34	+3	1.1	0.8	Anionic/Non-ionic

## VEOVA COPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Tg (°C)	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 4550	52	600	6	+24	+13	1.07	0.15	Anionic/Non-ionic

## VINYL ACETATE / VINYL ACRYLIC COPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Tg (°C)	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 2419	54	3,000	5.5	-19	0	1.06	0.2	Anionic/Non-ionic
VINAVIL 2429	64.5	1,500	4.2	-30	0	1.05	0.55	Anionic/Non-ionic
VINAVIL 2431	55	300	5.5	-31	0	1.05	0.25	Anionic/Non-ionic
VINAVIL 2433	59	1,500	6	-33	0	1.02	0.9	Anionic
VINAVIL 2440	67	1,000	4.5	-40	0	1.03	0.5	Anionic/Non-ionic
VINAVIL 2445	58	500	5	-43	0	1.04	0.45	Anionic/Non-ionic
VINAVIL 4425	55	1,000	4.5	+28	+7	1.07	0.3	Anionic/Non-ionic
VINAVIL 5424	53.5	400	5	-24	0	1.05	0.23	Anionic/Non-ionic

## Vinyl Acetate / Vinyl Versatate Copolymers Veova Copolymers Vinyl Acetate / Vinyl Acrylic Copolymers

■ MAIN USES

■ POSSIBLE USES

Indoor Emulsion Paints	Indoor Wall Textured Coatings	Outdoor Emulsion Paints	Outdoor Wall Textured Coatings	Grit Plastic Coatings	Glossy Emulsion Paints	Paper Saturation	Thermal Insulation Systems (EIFS)	Lime Paints	Intumescent Paints	Product Name
■	■	■	■	■						VINAVIL 03V
■						■				VINAVIL 3525
■	■				■					RAVEMUL T33
■		■					■	■	■	RAVEMUL T37

■ MAIN USES

■ POSSIBLE USES

Indoor Emulsion Paints	Indoor Wall Textured Coatings	Outdoor Emulsion Paints	Outdoor Wall Textured Coatings	Masonry Paint	Thermal Insulation Systems (EIFS)	Intumescent Paints	Product Name
■	■	■	■	■	■	■	VINAVIL 4550

■ MAIN USES

■ POSSIBLE USES

Pressure-Sensitive Adhesives	Flooring Adhesives	Paper Additive	Paper External Adhesion	Indoor Emulsion Paints/Coatings	Outdoor Emulsion Paints/Coatings	Product Name
■	■	■		■	■	VINAVIL 2419
■	■		■			VINAVIL 2429
■	■					VINAVIL 2431
■						VINAVIL 2433
■	■					VINAVIL 2440
■						VINAVIL 2445
				■		VINAVIL 4425
■	■					VINAVIL 5424

# Styrene / Acrylic Copolymers

## STYRENE / ACRYLIC COPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Tg (°C)	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL 4711	49.5	1,500	7	+11	+1	1.02	0.15	Anionic/Non-ionic
VINAVIL 4723	49	2,500	7	+23	+13.5	1.01	< 0.15	Anionic/Non-ionic
VINAVIL 4723 NA	50	3,500	5	+23	+13.5	1.01	< 0.15	Anionic/Non-ionic
VINAVIL 4723 NA (DS)	49.5	7,000	8	+23	+13.5	1.04	< 0.15	Anionic/Non-ionic
VINAVIL 4724S	49	900	7	+24	+20	1.03	0.12	Anionic/Non-ionic
VINAVIL 4735	52.5	150	6.5	-35	0	1.02	0.2	Anionic/Non-ionic
CRILAT 4747	49	900	8.5	+47	+45	1.04	0.09	Anionic/Non-ionic
CRILAT 4768	50	4,000	7.5	+2	0	1.06	0.08	Anionic/Non-ionic
VINAVIL 5706	57	400	6.5	-6	0	1.05	0.2	Anionic
VINAVIL 5707LP28	28	25	7.0 - 7.5	+7	0	1.01	0.13	Anionic
VINAVIL 5713	55	1,000	8	-13	0	1.05	0.25	Anionic/Non-ionic
VINAVIL 5720	50.5	250	7.5	+20	+18	1.05	0.15	Anionic/Non-ionic
VINAVIL 5722	55.5	200	5.5	-23	0	1.05	0.3	Anionic/Non-ionic
VINAVIL 6713	70	20,000	8	-13	0	1.27	0.8	Anionic/Non-ionic

## Styrene / Acrylic Copolymers

■ MAIN USES    ■ POSSIBLE USES

Indoor/Outdoor Wall Paints and Plasters	Flexible Coating and Waterproofing Membranes	Wood Flattening and Primers	PSA Adhesives	Caulk/ Sealant	Flooring Adhesives	Cementitious Waterproofing Membranes	Direct to Metal	Paper Internal Additive	Paper Adhesives	Product Name
■	■					■				VINAVIL 4711
■					■					VINAVIL 4723
■					■					VINAVIL 4723 NA
■					■					VINAVIL 4723 NA (DS)
	■						■			VINAVIL 4724S
	■		■							VINAVIL 4735
■							■			CRILAT 4747
■	■									CRILAT 4768
■	■	■		■	■	■				VINAVIL 5706
	■									VINAVIL 5707LP28
	■	■		■	■	■				VINAVIL 5713
		■								VINAVIL 5720
	■	■	■	■	■	■				VINAVIL 5722
	■ (mosaic)									VINAVIL 6713

# Acrylic Copolymers Thickeners

## ACRYLIC COPOLYMERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Tg (°C)	MFFT (°C)	Specific Gravity	Particle Size (µm)	Emulsifying System
CRILAT 1815	49	125	8.0	-15	0	1.04	0.14	Anionic/Non-ionic
VINAVIL 2841NA	61	1,500	5.5	-41	0	1.04	0.28	Anionic
CRILAT 2953LHV	50	500	3.5	+38	+8	1.05	0.11	Anionic
VINAVIL 4811	54	600	9.0	-10	0	1.06	0.3	Anionic/Non-ionic
CRILAT 4815	31	< 500	7.0	+15	+5	1.03	0.025 - 0.040	Anionic/Non-ionic
VINAVIL 4829	55	< 850	9.0	-30	0	1.04	0.3	Anionic/Non-ionic
CRILAT 4830	46	1,000	9.0	+26	+10	1.06	0.06 - 0.12	Anionic
VINAVIL 5810	48	150	8.5	+10	+6	1.02	0.13	Anionic/Non-ionic
VINAVIL 5815	51.5	100	7.5	+15	+17	1.07	0.15	Anionic/Non-ionic
VINAVIL 5816	52	100	8.5	+16	+14	1.04	0.15	Anionic/Non-ionic
VINAVIL 5844	45	100	9.0	Core-shell	+15	1.04	0.34	Anionic/Non-ionic
VINAVIL 5845	55	200	8.0	-45	0	1.04	0.3	Anionic/Non-ionic
CRILAT 5850	42.5	45	9.0	+55	+30	1.04	0.085	Anionic
CRILAT 7829	44	< 300	8.0	Core-shell	< +10	1.06	0.06 - 0.10	Anionic

## THICKENERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Solids Content (%)	Viscosity (cps)	pH	Specific Gravity	Particle Size (µm)	Emulsifying System
VINAVIL PA2000	28	17	3	1.05	< 0.2	Anionic/Non-ionic

**Uses:** HASE-type thickeners are used to adjust viscosity or modify rheology of water-based systems.

## Acrylic Copolymers Thickeners

■ MAIN USES    ■ POSSIBLE USES

Indoor/Outdoor Wall Paints and Plasters	Gloss Paints/ Enamels	Flexible Coating and Roofing Membranes	Wood Flatting and Primers	PSA Adhesives	Direct to Metal	Label Adhesives	Cementitious Waterproofing Membranes	Textile Printing, Finishing and Impregnation	Product Name
								■	CRILAT 1815
				■		■		■	VINAVIL 2841NA
						■			CRILAT 2953LHV
		■							VINAVIL 4811
■			■						CRILAT 4815
		■							VINAVIL 4829
■	■				■				CRILAT 4830
■	■							■	VINAVIL 5810
■	■						■	■	VINAVIL 5815
■	■						■	■	VINAVIL 5816
		■	■	■			■		VINAVIL 5844
		■	■	■			■		VINAVIL 5845
■	■						■		CRILAT 5850
■	■		■		■				CRILAT 7829

# Solid Polymers

## REDISPERSIBLE POWDERS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	Type	Appearance	Tg (°C)	Specific Gravity	Anti-Caking Agent (%)	Humidity (%)	pH Solution 4%
VINAVIL 5406P	Polyvinyl acetate / vinyl versatate / vinyl acrylic ester	Free-flowing powder	+15	0.45	12	2 max.	5
VINAVIL 5415HP	Polyvinyl acetate / vinyl acrylic ester	Free-flowing beige powder	+15	0.6	11	2 max.	7
VINAVIL 5526P	Polyvinyl acetate / vinyl versatate	Free-flowing beige powder	+22	0.45	12	2 max.	6
VINAVIL 5603P	Polyvinyl acetate / ethylene	Free-flowing powder	-3	0.45	11	1 max.	5.5
VINAVIL 5605HP	Polyvinyl acetate / ethylene	Free-flowing beige powder	-5	0.45	12	2 max.	7.5
VINAVIL SL 11P	Polyvinyl acetate / vinyl versatate	Free-flowing beige powder	+31	0.45	12	2 max.	6

## VINYL ACETATE HOMO- AND COPOLYMERS IN BEADS

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	K Value	Softening Range °C	Polymer Type
VINAVIL K 40	40±2	83-101	PVA
VINAVIL K 50	50±3	100-119	PVA
VINAVIL K 55	54±3	114-125	PVA
VINAVIL K 60	62±3	145-165	PVA
VINAVIL K 70	72±3	195-225	PVA
VINAVIL K 115	118±5	-	PVA
VINAFLEX CR 25	43±2	-	VA/CR
VINAFLEX CR 50	50±1	-	VA/CR
VINAFLEX CR 95	30±2	-	VA/CR

## VINYL ACETATE HOMOPOLYMERS FOR THE FOOD INDUSTRY

### CHEMICAL/PHYSICAL PROPERTIES

Product Name	K Value	Weight - Average Molecular Weight (DALTON)	Acetic Acid (ppm)	Residual Monomer (ppm)	Physical Form
RAVIFLEX BL 1 S	20±1	11,000 - 15,000	500 max.	2 max.	Bulk, flakes and pastilles
RAVIFLEX BL 5 S	26±1	22,000 - 30,000	500 max.	2 max.	Flakes and pastilles
RAVIFLEX BL 6 S	31±2	35,000 - 45,000	500 max.	2 max.	Flakes and pastilles
RAVIFLEX BL 7 S	33±2	40,000 - 55,000	500 max.	2 max.	Flakes and pastilles



## Solid Polymers

■ MAIN USES    ■ POSSIBLE USES

Cement-Based Mortars	Tile Adhesives	Self-Leveling Compounds	Paints and Plasters	Adhesives for Wallpaper	Hydrophobic	Product Name
■			■			VINAVIL 5406P
■			■		■	VINAVIL 5415HP
■	■		■	■		VINAVIL 5526P
■	■		■			VINAVIL 5603P
■			■		■	VINAVIL 5605HP
■		■	■			VINAVIL SL 11P

■ MAIN USES    ■ POSSIBLE USES

Wood Paste	Hobby Solvent Glue	Parquet Solvent-Based Adhesives	Sound Damping Panels	Heat-Sealable and Extrudable Adhesives	Low-Profile Additives	Solvent-Based Inks	IWR Promoter in Combination with Cirlat 2951 L	High-Bonding Solvent-Based Adhesive	Product Name
	■			■		■		■	VINAVIL K 40
	■			■		■		■	VINAVIL K 50
	■			■		■			VINAVIL K 55
	■	■	■						VINAVIL K 60
		■	■						VINAVIL K 70
■								■	VINAVIL K 115
					■				VINAFLEX CR 25
					■				VINAFLEX CR 50
							■		VINAFLEX CR 95

■ MAIN USES    ■ POSSIBLE USES

Low Molecular Weight	Medium Molecular Weight	Medium/High Molecular Weight	High Molecular Weight	Gum Base For Chewing Gum	Product Name
■				■	RAVIFLEX BL 1 S
	■			■	RAVIFLEX BL 5 S
		■		■	RAVIFLEX BL 6 S
			■	■	RAVIFLEX BL 7 S

# VINAVIL Americas

Next-generation polymer emulsions for the coatings industry

- **CRILAT 7829** and **CRILAT 4830** high-performance acrylics for exterior wood coatings and water-based enamels for interior/exterior wood/metal
- **CRILAT 4815** nano-technology-based primer for concrete and other substrates
- Proven European-technology-based VeoVa® emulsion for paints and coatings
- Polymer emulsions for direct-to-metal (DTM) applications



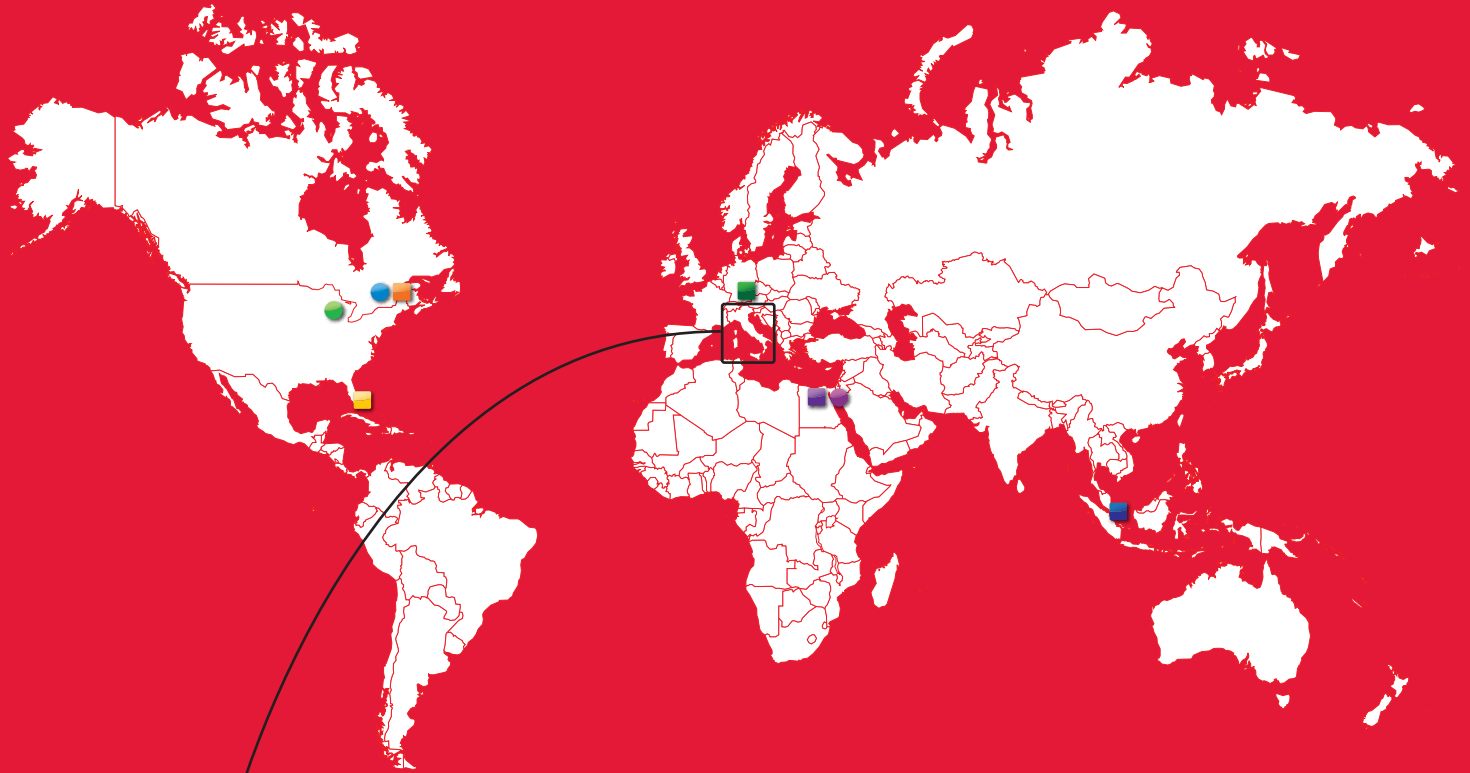
VINAVIL... Your partner in polymers

[www.vinavil.com](http://www.vinavil.com)



**VINAVIL**®





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**Commercial Offices**

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- Laval (Montreal), QC - CANADA
- Germany - EUROPE
- Cairo - EGYPT
- Singapore - SINGAPORE

**Plants**

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- Ravenna - ITALY
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- Suez - EGYPT