



pinopine
innovation is nature



PinoPine is recognized as a Global Player specialist in the manufacturing of **Gum Rosin Derivatives** producing for several industries and applications such as Adhesives, Chewing Gum, Depilatory Waxes, Road Marking, Printing Inks, Varnishes, Rubber, etc. Water Borne Dispersions are another **strategic range of products** developed by PinoPine, having a wide range of **solutions** in this area for application from labels to adhesive tapes.

PinoPine's main priority has always been commitment and **environmental respect** throughout the life cycle of our products, creating ideas and generating **new concepts**.

Global Presence. We are present in more than 30 countries directly or through local partners.

High Productive Capacity. Two plants in Aveiro **Portugal** with more than 33,000 m2 and production capacity above 3000 ton/month and has the most **advanced technological solutions** in the area of gum rosin derivatives production.

Research and Development. PinoPine is a dynamic organization that constantly invests in research and development that meet the expectations of our customers.

The commitment to **innovation** through the Research and Development component combined with the **experience** gained, has made PinoPine recognized in the market as a **specialist** in the production of derivatives, with products developed to provide flexible formulation options in **partnership** with our customers.



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FIND YOUR NATURAL PRODUCT



DISPERSIONS

WATER BORNE TACKIFIERS	Product Line	Dispersion Properties					Dry Properties		Applications
		Product	Solids Content (%)	Viscosity (@ 25°C) (mPa.s)	pH	Particle Size (max)	AV (mg KOH/g)	Softening Point (°C)	
	Rosin Ester	AQUADHES 6001	53-55	100-800	6,5-7,5	600	< 20	72-82	Tapes and Labels (Pressure Sensitive Adhesives)
		AQUADHES 6002	52-54	50-300	6,0-8,0	350	< 15	65-75	
	Rosin Acid	AQUADHES 6101	51-53	50-500	6,5-8,5	350	< 170	---	
		AQUADHES 6102	51-53	100-800	7,0-9,0	350	> 110	54-64	
	Hybrid Resin	AQUADHES 6201	52-54	50-300	5,5-7,5	350	< 20	72-82	
		AQUADHES 6202	58-60	300-1000	5,5-7,5	350	< 20	72-82	
		AQUADHES 6203	55-57	100-700	5,5-7,5	350	< 50	88-98	

OTHER PRODUCTS

Product Line	Product	AV (mg KOH/g)	Color (Gardner)	Relative Density	Solids Content (%)	Softening Point (°C)	Refractive Index (20°C)
Gum Turpentine	"P. elliottii"	2 max	incolor	0,860-0,870			1,4660-1,4750
	"P. pinaster"	2 max	incolor	0,860-0,870			1,4660-1,4750
Rosin Soaps	EcoResin 4002	8-16			69-71		
	EcoResin 4003	8-12			69-71		
Rosin Blends	EcoResin 4205	10 max	4 max				
	EcoResin 4206	145-175	10 max			74-90	

FOOD AND BEVERAGE

ROSIN ESTERS	Product Line	Product	AV (mg KOH/g)	Color (Gardner)	Softening Point (°C)(Mettler)	Taste/Odor
	Glycerol Esters for Chewing Gum	EcoResin Gum 3101	8 max	8 max	84-88	Neg
		EcoResin Gum 3102	8 max	8 max	80-84	Neg
		EcoResin Gum 3103	8 max	8 max	89-94	Neg
	Product Line	Product	AV (mg KOH/g)	Color (Gardner)	Softening Point (°C)(R&B)	Taste/Odor
	Polymerized Glycerol Ester for Chewing Gum	EcoResin Gum 3401	9 max	10 max	108-114	Neg
		EcoResin Gum 3404	12 max	10 max	103-107	Neg
	Glycerol Esters for Beverage	EcoResin Gum 3104	4-8	8 max	88-92	Neg

TACKIFIERS

Category	Product Line	Product	Acid Value (mgKOH/g)	Color (Gardner)	Softening Point (°C)	% Abietic Acid	Viscosity (mPa.s)	Observations	Applications				
									Depilatory Waxes	Adhesives	Flooring	Road marking	Special Applications
ROSIN	Gum Rosin	EcoTack 1001	140-170	7 max	72-82				●	●		●	●
		EcoTack 1002	155-185	7 max	70-85				●	●		●	●
		EcoTack 1003	140-170	6 max	81-86			Special Grade	●	●		●	●
	Non Crystallizing Gum Rosin	EcoTack 1102	170 max	8 max	79-83					●	●		
		EcoTack 1103	150 max	9 max	94-99					●	●		
		EcoTack 1104	150 max	6 max	71-76	8 max				●	●		
		EcoTack 1105	130 max	8 max	68-72					●	●		
		EcoTack 1106	170 max	8 max	85-90					●	●		
		EcoTack 1107	160 max	8 max	78-82					●	●		
		EcoTack 1108	160 max	12 max	65-70°C	5 max							●
	Disproportionated Rosin	EcoTack 1201	160 max	11 max	65-73°C	0.5 max							●
	Polymerized Rosin	EcoTack 1301	160 max	10 max	100-105				●	●			●
		EcoTack 1302	140 max	6 max	84-88	10 max				●			●
ROSIN ESTERS	Glycerol Esters	EcoTack 3105	15 max	4 max	86-90		130-190	Thermosel, 170°C	●	●		●	
		EcoTack 3106	15 max	4 max	82-86		100-170		●	●		●	
		EcoTack 3107	15 max	4 max	90-95		125-250				●		
		EcoTack 3108	15 max	4 max	92-96					●		●	
		EcoTack 3109	60 - 70	4 max	65-75		100-150	Thermosel, 150°C	●	●			
	Modified Glycerol Esters	EcoTack 5210	15 max	4 max	98-102							●	
		EcoTack 5211	10 - 20	5 max	100-110							●	
	Penta Esters	EcoTack 3201	20 max	3+ max	95-100		300 (a) / 1200 (b)	(a) Thermosel, 170°C (b) Thermosel, 150°C		●		●	
		EcoTack 3202	20 max	4 max	105-110		630 (a) / 2500 (b)			●		●	
		EcoTack 3203	80-90	4 max	90-95					●			
	Modified Penta Esters	EcoTack 5201	20 max	4 max	110-115					●		●	●
		EcoTack 5202	20 max	9 max	123-129					●			●
	Triethylene Glycol Esters	EcoTack 3301	20 max	4 max			400-500	Rheometer, 80°C	●		●		
		EcoTack 3302	30 max	4 max			35000-40000	Rheometer, 50°C	●				
		EcoTack 3303	20 - 30	4 max			15000-25000	Rheometer, 35°C			●		
		EcoTack 3304	30 - 60	4 max			30000-50000				●		
		EcoTack 3305	30 - 50	6 max			400000-500000				●		
		EcoTack 3306	20 max	4 max			80000-120000	Rheometer, 20°C	●	●	●		
		EcoTack 3307	20 max	4 max			25000-55000		●	●	●		
		EcoTack 3308	12 max	4 max			7000-13000		●		●		
		EcoTack 3309	20 max	6 max			85000-115000				●		
	Specially Modified Esters	EcoTack 5011	20 max	8 max	130-140								●
		EcoTack 5012	20 max	8 max	115-120								●
		EcoTack 5013	70-90	8 max	155-165								●
	Rosin Esters Blends	EcoTack 4201	70-80	8 max			500-900	Rheometer, 80°C		●	●		
		EcoTack 4202	45-60	8 max			700-900			●	●		
		EcoTack 4203	10-20	5 max			5050-5950	Rheometer, 65°C		●	●		
		EcoTack 4204	70-90	8 max				VOC 's < 30 ppm		●	●		

OFFSET PRINTING INKS RESINS									
Product Line	Product	Viscosity (Rheometer, 23°C, 25 s-1, Pa.s)					Cloud Point (°C)		
			Test Oils						
		% Solids	6/9	6/9 AR Blend	6/9 AR	55% Soya Oil + 45% 6/9 AR	6/9 AF	6/9 AF New	6/9
Phenol Modified Rosin Esters	EcoPrint 5001	35		20-35				100-120	
	EcoPrint 5002	40			20-30			120-135	
	EcoPrint 5003	35		7,5-12,5					90-105
	EcoPrint 5004	45		30-45				120-135	
	EcoPrint 5005	40	20-35				115-130		
	EcoPrint 5006	50	20-35				120-135		
	EcoPrint 5007	35			8-15				60-80
	EcoPrint 5008	45		* 35-45				110-130	
	EcoPrint 5009	38		* 20-30					70-90
	EcoPrint 5010	35		70-110					90-120
Phenol Free Resins	EcoPrint 5208	45				7-15		135-145	
	EcoPrint 5209	47,5		70-105				145-165	
* 25°C, 80 s-1, Pa.s									

OFFSET PRINTING INKS VARNISHES										
Product Line	Product	% Solids (approx.)	Viscosity (Rheometer, 23°C, 25 s-1, Pa.s)	Cloud Point (10% in T.O. 6/9 AF New)	Tack (Lithotack, 0.4 g, 32.2°C, 400rpm, 60'')	Applications				
						Grinding/ Free Flow Varnish	Letdown/ Gel Varnish	Single Varnish	OverPrint Varnish	Heatset Varnish
Standard Varnishes	EcoPrint 5101	65	35-65	130-180	40-80	●				
	EcoPrint 5102	67	100-150	90-150	60-100		●			
	EcoPrint 5103	70	100-150	90-150	60-110		●			●
	EcoPrint 5104	50	20-60	90-150	50-100	●				●
	EcoPrint 5105	70	15-35	100-150	20-70				●	
	EcoPrint 5106	65	25-55	60-110	50-90	●				
	EcoPrint 5107	55	250-300	120-150	80-120		●			
	EcoPrint 5108	80	300-500	80-130	100-160			●		
	EcoPrint 5109	95	200-280	80-140	100-150		●			

ALKYD RESINS					
Product Line	Product	Acid Value (mg KOH/g)	Color (Gardner)	Viscosity (Rheometer, @ 20°C, Pa.s)	Vegetable Oil Type
Alkyd Resins	EcoPrint 5301	15 max	12 max	20 - 40	Linseed
	EcoPrint 5302	11 max	11 max	45 - 55	Soya
	EcoPrint 5303	7 - 15	18 max	25 - 45	Coconut

GRAVURE PRINTING INKS RESINS				
Product Line	Product	Viscosity (in Toluene, s)		Dilution Rate (mL Toluene/100g resin solution)
			DIN #6	To 30" GS 3 mm
		% Solids	22 °C	22 °C
Phenol Free Resins	EcoPrint 5501	30	10 - 40	190-280

FLEXO PRINTING INKS AND LACQUERS											
ROSIN ADDUCTS AND THEIR ESTERS	Product Line	Product	Acid Value (mg KOH/g)	Color (Gardner)	Softening Point (°C)	Viscosity (s) (DIN #4, 25°C, 50% in Toluene)	Viscosity (s) (DIN #4, 25°C, 50% in Ethanol)	Applications			
								Solvent based	Water based	Nitrocellulosic varnishes	Fruit cover varnishes
	Maleic	EcoResin 5401	40 max	10 max	125-135	15-25				●	
		EcoResin 5402	35 max	9 max	135-140	15-35				●	
		EcoResin 5403	40 max	9 max	140-150	15-30				●	
	Fumaric	EcoResin 5205	200-225	10 max	145-165		10 - 30	●		●	●
		EcoResin 5206	135-150	9 max	140-155	20 - 60			●		
		EcoResin 5207	180-200	9 max	140-155		10 - 30	●	●		



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