



2019  
EDITION

# WOOD AND PLASTIC

 **HELIOS** RESINS



HELIOS

RESINS,

HIGH-QUALITY

RESINS FOR

RELIABLE

COATING

SOLUTIONS.



# WOOD AND PLASTIC

THESE HIGH-QUALITY RESINS  
HAVE BEEN DEVELOPED TO  
ACHIEVE THE FINEST  
DECORATIVE WOODEN AND  
WOOD-LIKE SURFACES.

## GOLDEN RESINS

Helios Resins is a separate business unit of Helios, now part of Kansai Paint, one of the world's leading paint and coatings producers. Today, Helios Resins produces around 60,000 tons of liquid resins annually, including coating resins, composite resins, and polyester polyols for PU flexible foams. Our coating resin brands – DOMOPOL, DOMACRYL, DOMALKYD, DOMEMUL and DOMOPUR – have achieved a strong market position and are trusted for their quality and performance. We currently serve more than 50 countries worldwide.

## QUALITY OF SERVICE

We are committed to providing a flexible and reliable service while satisfying our customers' specific requests. Helios Resins ensures the quality, stability and reproducibility of every delivery. Our extensive know-how, resulting from more than 100 years of experience, enables us to provide solutions to our customers' challenges. Helios Resins experts produce tailor-made resins for specific needs and offer support in developing customized applications.

## DEVELOPED WITH ADVANCED TECHNOLOGIES

Our laboratories and production facilities are fully equipped with the most advanced technologies, which enables the development and production of resins. Our R&D has advanced skills as well as equipment for polyester and acrylic chemistry, including synthesis under pressure. We are constantly upgrading our production lines and increasing our production capacities to meet the highest demands of our customers. In 2018 we introduced a new reactor line for water-based resins.

## OUR STRENGTHS

- FLEXIBILITY
- ON-TIME DELIVERY
- HIGH QUALITY

## ACRYLIC WATERBORNE 1K EMULSIONS

RESIN	DELIVERY FORM	VISCOSITY 23 °C [mPa.s]	pH
DOMEMUL AA 7960	45 Wa	20 – 250	6.0 – 8.0
DOMEMUL AA 9670	40 Wa	100 – 800	7.5 – 9.5
DOMEMUL AA 9672	44 Wa	max. 150	7.5 – 9.5
DOMEMUL AA 9673	42 Wa	20 – 250	7.5 – 8.5
DOMEMUL AA 7760	41 Wa	20 – 500	7.5 – 9.0
DOMEMUL RA 9675	35 Wa	50 – 1000	6.0 – 7.0
DOMEMUL SA 9262	42 Wa	50 – 250	8.0 – 8.5
DOMEMUL SA 9263	40 Wa	20 – 350	8.0 – 8.5
DOMEMUL SA 2700	50 Wa	100 – 800	8.0 – 9.5

## ACRYLIC WATERBORNE 2K EMULSIONS

RESIN	DELIVERY FORM	HYDROXYL CONTENT on solid resin [mg KOH/g]	VISCOSITY 23 °C [mPa.s]
DOMEMUL OHA 9200	45 Wa	70 – 100	20 – 600
DOMACRYL 0707	43 Wa / DPM	100 – 120	100 – 3000
DOMACRYL 0769	45 Wa / BG / SA	100 – 120	200 – 1000
DOMACRYL 0724	45 Wa / PnB / SA	125 – 145	200 – 1000

## ALKYD WATER EMULSIONS

RESIN	DELIVERY FORM	VISCOSITY 23 °C [mPa.s]	MODIFICATION / OIL LENGHT
DOMALKYD 0460	38 Wa / MP	9000 – 15000	Acrylic modified, 56%
DOMALKYD 0461	38 Wa / BG	2000 – 10000	Acrylic modified, 56%
DOMALKYD 0545	40 Wa	50 – 500	PU modified, 44%

## POLYURETHANE DISPERSIONS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	VISCOSITY 23 °C [mPa.s]
DOMOPUR 0211	36 Wa	20 – 25	20 – 400
DOMOPUR 0231	40 Wa	15 – 20	100 – 1000

## ACRYLIC SOLVENTBORNE 1K RESINS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	VISCOSITY 23 °C [mPa.s]
DOMACRYL 833	50 D-30	max. 2	2500 – 3500
DOMACRYL 840	50 X / SA	5 – 10	4000 – 6000
DOMACRYL 841	50 BAc	max. 10	3000 – 3500
DOMACRYL 846	50 X / SA	5 – 10	3000 – 4500
DOMACRYL 854	65 BAc	15 – 25	5000 – 9000
DOMACRL 872	60 X	8 – 12	10000 – 15000

MFFT [°C]	DESCRIPTION
0	Core-shell emulsion for wood coatings, joinery and furniture. Good anti-blocking. APEO-free version is available by request.
0	Core-shell APEO-free acrylic emulsion for interior and exterior wood coatings and joinery. Good anti-blocking.
0	Core-shell APEO-free acrylic emulsion for interior and exterior wood coatings. Good gloss.
7	Self-crosslinking APEO-free acrylic emulsion for interior and exterior wood coatings. Fast drying and good anti-blocking.
32	Self-crosslinking APEO-free acrylic emulsion for interior wood coatings. Good chemical and mechanical resistance.
0	Acrylic APEO-free latex for effect pigmented coatings (metallic, pearlescent).
30	Styrene-acrylic emulsion with good mechanical and chemical resistance. APEO-free version is available by request.
45	Styrene-acrylic APEO-free emulsion. Harder than DOMEMUL SA 9262.
90	Acrylic APEO-free emulsion. Good water and chemical resistance.

pH	DESCRIPTION
7.5 – 9.0	OH-functional styrene-acrylic primary emulsion for low VOC coatings. Tg = 53. Cost-efficient.
8.0 – 9.0	Modified acrylic secondary dispersion. Very flexible. Good wet-on-wet application.
7.0 – 8.5	Standard secondary acrylic dispersion for medium OH PUR coatings.
7.0 – 8.0	Acrylic secondary dispersion. Standard resin with excellent applicability, chemical resistance and appearance.

pH	DESCRIPTION
8.0 – 9.0	Top coats and primers. Fast air drying, high gloss, excellent flow and very low-yellowing. Low VOC content.
7.5 – 9.0	Styrene-free emulsion for top coats and primers. Fast air drying, high gloss, excellent flow and very low-yellowing. Low VOC content.
7.0 – 8.0	Rapid air drying, high gloss and hardness, good water and chemical resistance. Approx. 1% Hydroxyl content on solid resin. Without organic solvent.

pH	DESCRIPTION
7.5 – 9.0	Very flexible, very good adhesion on ABS, PC, PVC, PU, PA and PS, very good pigmentability. A good plasticizer barrier on PVC-foils. Without organic solvents.
7.0 – 8.0	Based on aliphatic polyester-isocyanate. Good anti-blocking and abrasion resistance. Without organic solvents.

Tg [°C]	DESCRIPTION
56	Pigmented and transparent paints for plastics. Rapid drying. Also for aerosols.
62	Pigmented and transparent paints with good heat stability, hiding power. Hard, tough and flexible. Also for aerosols.
62	Pigmented and transparent paints with good heat stability, hiding power. Hard, tough and flexible. Also for aerosols.
72	Pigmented and transparent paints for plastic. Gasoline and plasticizers resistant. Also for aerosols.
14	Primers and top coats for plastics. Excellent toughness, rapid drying, high gloss and adhesion.
50	Pigmented and transparent paints for plastic. Rapid drying and excellent toughness.

## ACRYLIC SOLVENTBORNE 2K RESINS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMACRYL 5213	50 BAc	7 – 10	35 – 45
DOMACRYL 5214	40 BAc	15 – 20	35 – 45
DOMACRYL 505	60 X / BAc	max. 5	45 – 55
DOMACRYL 5269	52 BAc	max. 4	45 – 55
DOMACRYL 5353	58 X / BAc	max. 10	50 – 75
DOMACRYL 504	60 X / BAc	max. 10	55 – 65
DOMACRYL 568	60 X / MPA	max. 10	55 – 65
DOMACRYL 568	60 X	max. 10	55 – 65
DOMACRYL 5319	50 BAc	16 – 22	55 – 65
DOMACRYL 545	50 BAc	6 – 12	55 – 70
DOMACRYL 546	50 X / BAc	6 – 12	55 – 70
DOMACRYL 5359	60 BAc	8 – 12	55 – 70
DOMACRYL 5451	50 BAc	max. 3	55 – 70
DOMACRYL 539	50 BAc	15 – 20	60 – 70

## REACTIVE RESINS

RESIN	DELIVERY FORM	VISCOSITY 23 °C [mPa.s]	OIL LENGHT / OIL TYPE	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMALKYD 1435	66 BAc	600 – 1200	43% Talloil FA	
DOMALKYD 3381	65 X	10000 – 15000	38% DCO	
DOMALKYD 4161	70 BAc	1000 – 1500	16% Saturated FA	260 – 300
DOMALKYD 4333	70 BAc	1400 – 2000	33% Soyabean FA	70 – 110
DOMALKYD 4348	70 BAc	8000 – 10000	34% Vegetable FA	70 – 90
DOMALKYD 4383	70 BAc	3000 – 4500	38% Soyabean oil	
DOMALKYD 4402	75 BAc	3000 – 5000	40% Vegetable FA	
DOMALKYD 4411	75 BAc	1800 – 2400	41% Soyabean FA	
DOMALKYD 5254	70 BAc	3000 – 6000	25% Castor oil	160 – 200
DOMALKYD 5331	75 BAc	6000 – 10000	33% Synthetic FA	140 – 160
DOMALKYD 5421	75 BAc	2000 – 3500	42% Coconut FA	150 – 200
DOMOPOL 6181	75 X	6000 – 9000	Polyester polyol	145 – 180

## UV CURABLE RESIN

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]
DOMOPOL 105 UV	100%	max. 5
DOMOPOL 106 UV	100%	max. 5

AC = Acid curing, APEO = Alkylphenol ethoxylate, BAc = Butyl acetate, BG = Butylglycol, D-30 = Dearomatized white spirit, DCO = Dehydrated castor oil, DPM = Dipropylene SA = Aromatic solvent 100, Wa = Water, X = Xylene.

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
3000 – 5000	Very fast drying resin for wood coatings.
1800 – 2400	Very hard, used as additive resin in wood coatings.
1400 – 2400	Elastic resin for primers and top coats.
3000 – 5000	Long pot-life.
2500 – 5500	Resin for high gloss furniture coatings.
5500 – 7500	Resin for very elastic coatings for plastics. Good compatibility with other OH acrylic resins. Pigment paste resin.
3000 – 5000	Universal resin for industrial paints.
3000 – 5000	Universal resin for industrial paints.
4000 – 5000	Industrial wood primers and furniture finishes. Very fast drying.
4000 – 5000	Standard resin for wood coatings.
4000 – 5000	Standard resin for wood coatings.
8000 – 10000	Very fast drying varnishes and high solid paints.
4000 – 6000	Fast drying and very long pot-life, based on DOMACRYL 545, for clear and top coats.
4000 – 6000	Industrial wood primers.

ACID VALUE on solid resin [mg KOH/g]	DESCRIPTION
15 – 25	Lacquers and enamels for wood in combination with NC and urea resins. Very fast drying properties.
max. 25	Resin for combination with melamine and alkyd resins. NC and AC lacquers.
max. 4	2K PUR for wood parquet lacquers.
23 – 35	Lacquers and enamels for wood in combination with NC in AC lacquers.
max. 20	Lacquers for wood in combination with NC, forced drying paints in combination with amino resins.
max. 10	Lacquers and enamels for wood in combination with NC.
max. 20	AC lacquers and paints for wood.
max. 10	NC lacquers and enamels for wood, pigment pastes.
max. 17	Fast drying 2K PUR lacquers for wood.
6 – 10	2K PUR coatings for wood.
max. 10	High quality NC and AC lacquers for wood, 2K PUR lacquers for furniture.
max. 15	2K PUR coatings for wood (parquet, boats). Good pigment wetting and chemical resistant properties.

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
20000 – 30000	Acrylated polyester resin soluble in reactive solvent, suitable for UV and electron-beam curing paints lacquers and printing inks. Excellent adhesion on wood, paper and various plastics. Also for 3D printing material.
max. 1000	More flexible than DOMOPOL 105 UV with lower viscosity.

glycol monomethyl ether, FA = Fatty acid, MP = Methoxypropanol, MPA = Methoxy propyl acetate, NC = Nitrocellulose, PnB = Propylene glycol monobutyl ether,



ISO 9001  
ISO 14001

BUREAU VERITAS  
Certification



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