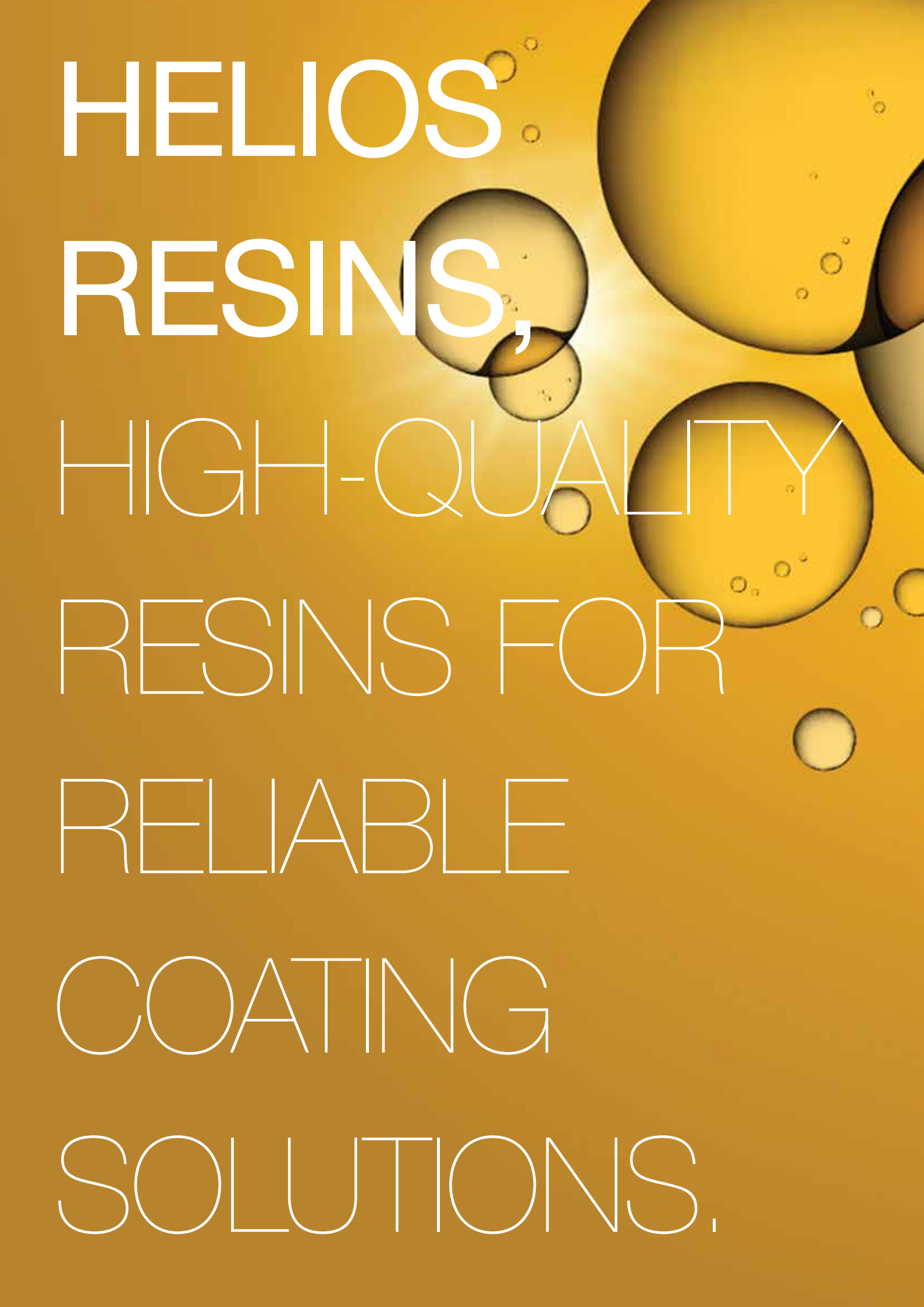
2024
EDITION

METAL, TRANSPORT AND ACE

HELIOS RESINS


HELIOS
RESINS,
HIGH-QUALITY
RESINS FOR
RELIABLE
COATING
SOLUTIONS.

METAL, TRANSPORT AND ACE

THESE RESINS ENSURE EXCELLENT PROTECTION COATINGS FOR A BROAD RANGE OF INDUSTRIAL METAL COATING APPLICATIONS.

GOLDEN RESINS

Today, Helios Resins produces around 70,000 tons of liquid resins annually, including coating and composite resins. Our coating resin brands – DOMACRYL, DOMOPOL, 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.

SUSTAINABLE APPROACH

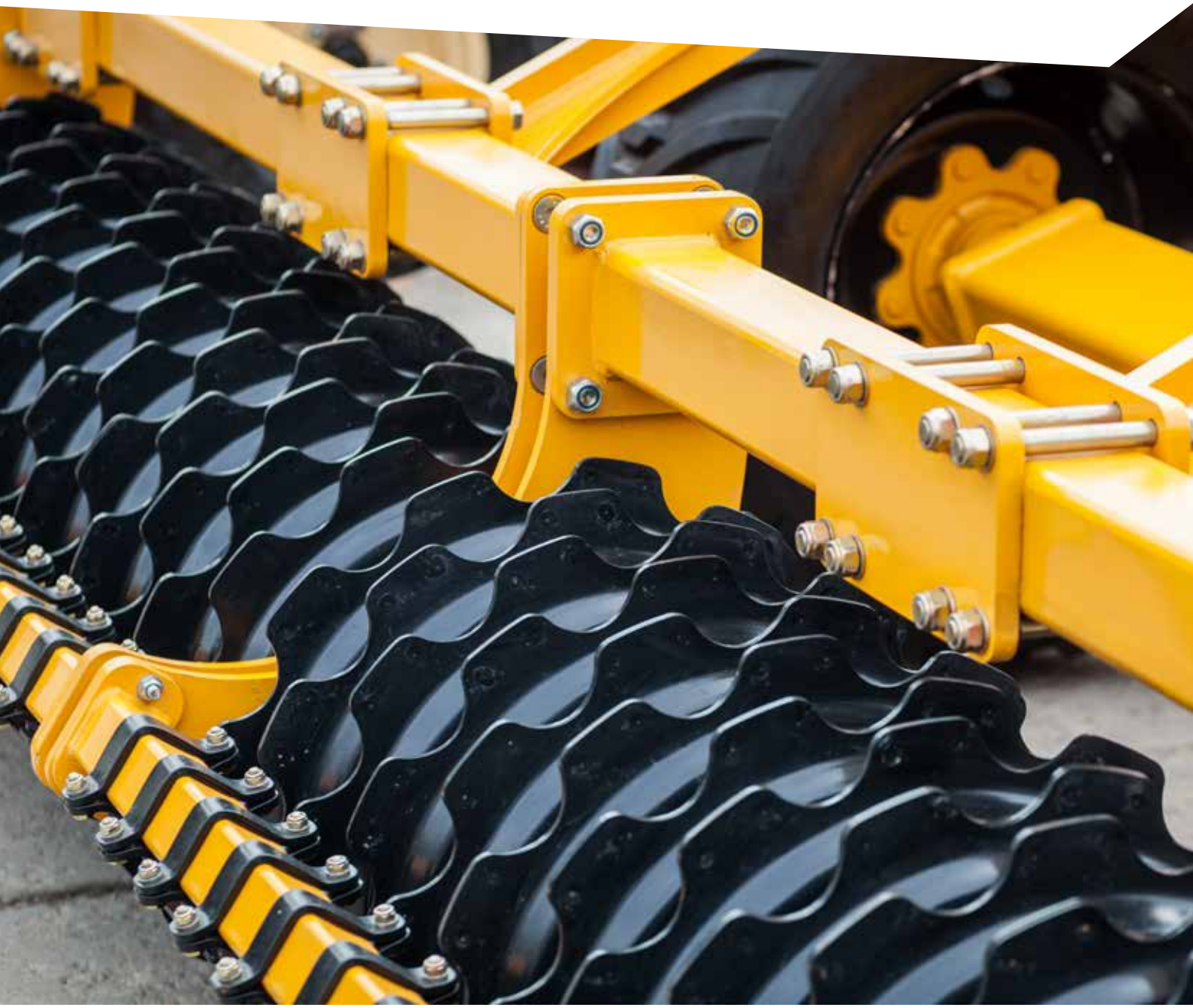
By developing advanced, green, and long-lasting materials, we reduce emissions of hazardous organic solvents, incorporate bio-renewable raw materials and create a potential for energy savings. Our sustainable approach encompasses the production of bio-based materials, water-based resins, high solids, BPA non-intent resins, recycling, and participation in EU initiatives. We are the first in Slovenia to be ISCC Plus certified and offer several products made from sustainable raw materials that are certified in all parts of the value chain back to the point of origin. A sustainable future matters greatly to us, our business, and our customers. We are proud to see this reflected in the EcoVadis Silver Medal we received for our sustainability performance.

DEVELOPED WITH ADVANCED TECHNOLOGIES

Our laboratories and production facilities are fully equipped with the most advanced technologies, which enables the development and production of even the most complex solvent and waterborne resins. Our R&D has advanced skills as well as equipment for polyester and acrylic chemistry, including synthesis under pressure. By continually upgrading our production lines and expanding our production capacities, we are able to meet the most rigorous and complex needs and demands of our customers.

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 tailormade resins for specific needs and offer support in developing customized applications.



ACRYLIC SOLVENTBORNE 1K RESINS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	VISCOSITY 23 °C [mPa.s]
DOMACRYL 285	55 SAB / BG	65 – 75	3500 – 7000
DOMACRYL 835	50 BAc	5 – 10	3000 – 5000
DOMACRYL 840	50 X / SA	5 – 10	4000 – 6000
DOMACRYL 841	50 BAc	max. 10	3000 – 4000
DOMACRYL 846	50 X / SA	5 – 10	3000 – 4500
DOMACRYL 854	65 BAc	15 – 25	5000 – 9000
DOMACRYL 857	50 BAc	5 – 10	1000 – 2500
DOMACRYL 857	55 X	5 – 10	2500 – 4500
DOMACRYL 872	60 X	8 – 12	10000 – 15000

Tg [°C]	DESCRIPTION
n/a	Adhesion improvement, high gloss and colour retention. Suitable for crosslinking with epoxy resins.
21	Universal resin for protective coatings, used alone or in combination with vinyl resins. Good durability and abrasion resistance.
69	Pigmented and transparent paints with good heat stability, hiding power. Hard, tough and flexible. Also for aerosols.
69	Pigmented and transparent paints with good heat stability, hiding power. Hard, tough and flexible. Also for aerosols.
79	Pigmented and transparent paints. Gasoline and plasticizers resistant. Also for aerosols.
23	Primers and top coats for nonferrous metals. Excellent toughness, rapid drying, high gloss and adhesion.
63	Pigmented and transparent paints. Also for spray-application paints with rapid drying.
63	Pigmented and transparent paints. Also for spray-application paints with rapid drying.
56	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 5196	60 SA	max. 10	33 – 50
DOMACRYL 505	60 X / BAc	max. 5	45 – 55
DOMACRYL 506	60 SA	max. 10	50 – 65
DOMACRYL 568	60 X / MPA	max. 10	55 – 65
DOMACRYL 568	60 X	max. 10	55 – 65
DOMACRYL 507	50 X / BAc	max. 5	60 – 70
DOMACRYL 5154	80 BAc	max. 10	60 – 80
DOMACRYL 536	60 X	max. 10	75 – 100
DOMACRYL 536	60 SA	max. 10	75 – 100
DOMACRYL 5367	70 BAc	15 – 22	75 – 100
DOMACRYL 5427	70 X	max. 10	80 – 100
DOMACRYL 5428	70 BAc	max. 15	80 – 100
DOMACRYL 5705	60 X	5 – 10	85 – 105
DOMACRYL 5130	70 BAc	6 – 10	90 – 110
DOMACRYL 5267	60 BAc	max. 10	90 – 110
DOMACRYL 5267	60 X / MPA	max. 10	90 – 110
DOMACRYL 521	60 X	max. 10	100 – 120
DOMACRYL 5262	75 BAc / EEP / MPA	max. 13	100 – 120
DOMACRYL 5210	75 BAc	7 – 11	110 – 130
DOMACRYL 5437	75 SA	8 – 12	110 – 130
DOMACRYL 547	60 X / SA / BAc	10 – 16	110 – 130
DOMACRYL 5475	65 X / BAc	5 – 12	120 – 140
DOMACRYL 5187	70 BAc	max. 15	130 – 145
DOMACRYL 5503	75 BAc	max. 12	130 – 145
DOMACRYL 5481	75 BAc	max. 12	130 – 150
DOMACRYL 5485	75 BAc	max. 12	135 – 155
DOMACRYL 5500	75 BAc	8 – 12	140 – 160
DOMACRYL 522	60 X / MPA	18 – 25	140 – 160
DOMACRYL 522	60 X / SA / BAc	max. 10	140 – 160
DOMACRYL 526	70 BAc	max. 8	140 – 160
DOMACRYL 544	60 X / SA / BAc	max. 12	140 – 160
DOMACRYL 543	60 X / MPA	8 – 14	145 – 165

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
4000 – 5000	Air and forced drying top coats with good lightfastness and chalking resistance. Adhesion on steel and most non-ferrous materials.
1400 – 2400	Standard elastic resin for industrial primers and top coats.
2000 – 2400	Standard resin for air-drying and stoving.
3000 – 5000	Universal resin for industrial paints.
3000 – 5000	Universal resin for industrial paints.
600 – 1200	Fast drying primers and top coats.
7000 – 11000	Cost-efficient high-solid two-pack protective systems (top and clear coats) with good mechanical properties and outdoor durability.
1300 – 2300	Standard resin for industrial paints.
2300 – 3300	Standard resin for industrial paints.
2700 – 4700	Anticorrosion primers, top and clear coats.
1500 – 3000	High solid primers and finishes for industrial paints with very good mechanical properties and outdoor durability.
1500 – 2500	Protective coatings for forced drying paints.
3000 – 4000	Top coats for agricultural machinery and high grade industrial paints.
4000 – 6000	Primers and top coats for transportation coatings, machinery and other high quality protective and maintenance coatings.
4000 – 6000	Universal resin for industrial paints.
4000 – 6000	Universal resin for industrial paints.
1400 – 1800	Protective coatings.
13000 – 17000	Room temperature drying or forced drying systems with fast build-up of hardness.
5000 – 8500	Standard high solid resin for clear and top coats.
4200 – 7000	High solid stoving finishes in combination with melamine resins. Improvement of appearance of the top coats in a combination with stoving alkyd or thermosetting acrylic resins is possible.
2500 – 3500	Standard resin for high–grade industrial paints with rapid initial drying.
3500 – 4500	Very fast drying.
2800 – 4200	Universal resin for industrial paints.
5000 – 7000	Fast drying. Excellent mechanical properties and superior outdoor durability. 25% bio-based on solid content.
4500 – 6000	Air and forced drying top coats with excellent outdoor stability, chemical resistance and mechanical properties.
8000 – 12000	Fast drying. DTM. 10% bio-based on solid content.
3500 – 10000	Very good balance between hardness and flexibility. Excellent mechanical properties and superior chemical resistance.
4000 – 5000	Standard resin for industrial paints.
4000 – 6000	Fast drying standard resin.
7000 – 11000	Coatings for large machinery, alone or in combination with saturated alkyd resins.
3500 – 8000	Fast drying. Also for primers including plastics.
2000 – 2500	Standard high-performance resin.

ACRYLIC SOLVENTBORNE 2K SPECIALTIES

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMACRYL 5652	55 BAc	max. 5	200 – 220
DOMACRYL 5109	85 BAc / Ac	max. 10	135 – 155
DOMACRYL 5245	75 BAc	max. 3	125 – 145
DOMACRYL 5270	75 BAc	max. 3	125 – 145
DOMACRYL 580	67 BAc	4 – 8	110 – 130
DOMACRYL 5369	75 BAc	max. 3	80 – 100
DOMACRYL 5451	50 BAc	max. 3	55 – 70
DOMACRYL 540	50 BAc	5 – 10	40 – 50
DOMACRYL 5220	45 Bac / X	6 – 12	30 – 40

ACRYLIC WATERBORNE RESINS

RESIN	DELIVERY FORM	VISCOSITY 23 °C [mPa.s]	pH	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMEMUL SA 9262	42 Wa	50 – 250	8.0 – 8.5	
DOMEMUL SA 9263	40 Wa	20 – 350	8.0 – 8.5	
DOMEMUL SA 9270	47 Wa	100 – 1000	7.0 – 9.0	
DOMEMUL AA 7601	44 Wa	max. 1000	8.0 – 10.0	
DOMEMUL RA 9675	35 Wa	50 – 1000	6.0 – 7.0	
DOMEMUL OHA 9200	45 Wa	20 – 600	7.5 – 9.0	70 – 100
DOMACRYL 0769	45 Wa / BG / SA	200 – 1000	7.0 – 8.5	100 – 120
DOMACRYL 0707	43 Wa / DPM	100 – 3000	8.0 – 9.0	100 – 120
DOMACRYL 0768	42 Wa / PnB	200 – 5000	8.0 – 9.0	130 – 150

ALKYD SOLVENTBORNE 1K RESINS

RESIN	DELIVERY FORM	OIL LENGHT / OIL TYPE	ACID VALUE on solid resin [mg KOH/g]
DOMALKYD 1261	60 X	26% Soyabean FA	max. 12
DOMALKYD 1272	60 X	27% Soyabean FA	max. 10
DOMALKYD 1351	75 BAc	39% Soyabean FA	max. 8
DOMALKYD 1361	60 X	34% Soyabean FA	max. 10
DOMALKYD 1401	60 X	40% Tall oil FA	max. 12
DOMALKYD 1468	50 Solvent mix	46% Non-yellowing FA	max. 12
DOMALKYD 1482	55 W / X	48% Soyabean FA	max. 12
DOMALKYD 1482	55 D-40 / MP	48% Soyabean FA	max. 12
DOMALKYD 1526	55 W	52% Soyabean oil	max. 15
DOMALKYD 3335	60 X / SA / nB	33% DCO	max. 25
DOMALKYD 4391	60 X	39% Soyabean FA	max. 15
DOMALKYD 5435	60 SA / X	43% Synthetic FA	max. 15

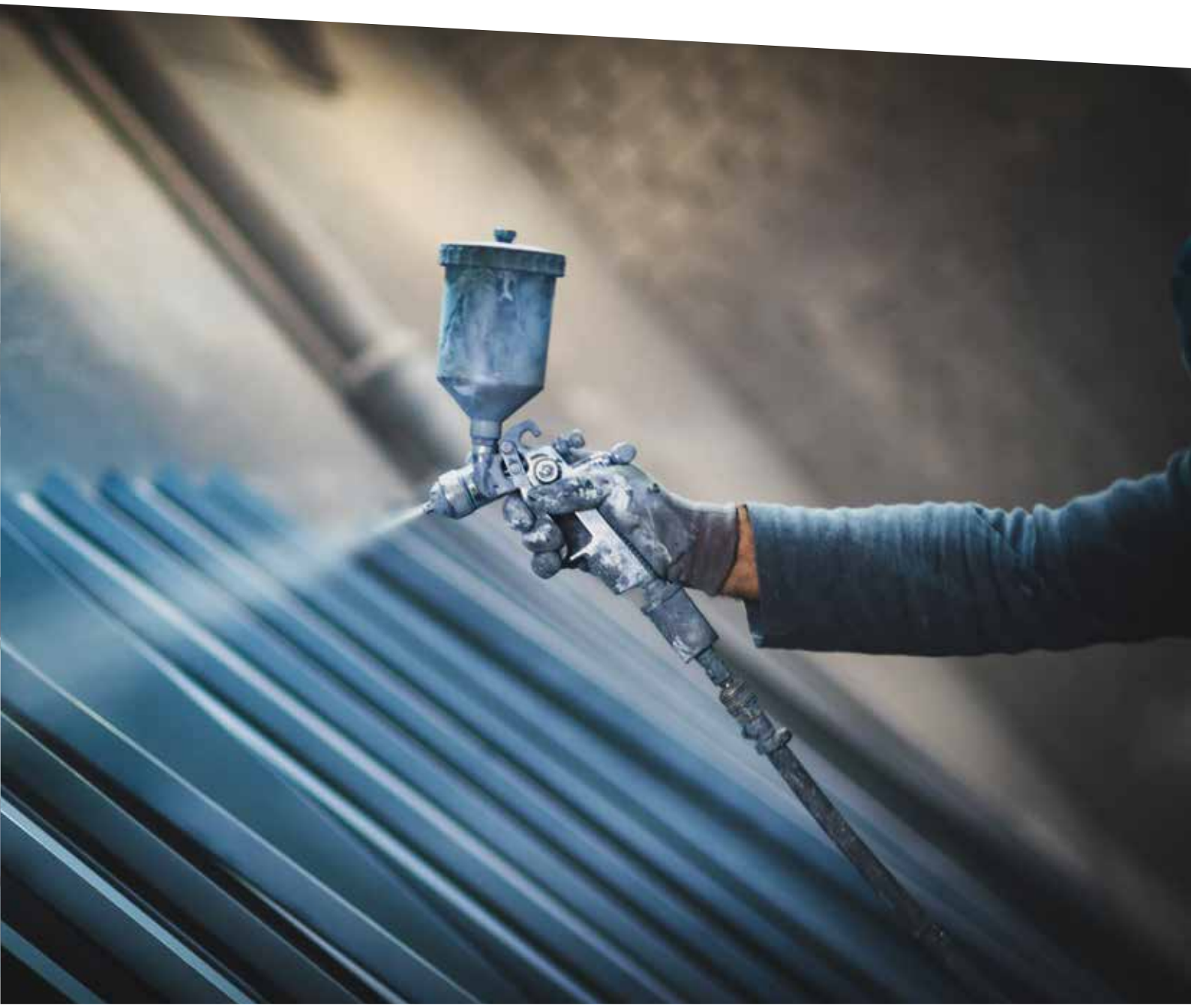
VISCOSITY 23 °C [mPa.s]	DESCRIPTION	
25000 – 45000	Epoxy and hydroxy dual functional resin for 2K stoving applications. Epoxy equivalent weight 650 g/mol. Curing with amines, amides, polycarboxylates and polyisocyanates. BPA free coatings.	
8000 – 12000	Clear and pigmented top coats. Good balance between hardness and flexibility, with excellent mechanical properties and superior outdoor durability. Suitable for DTM.	
2000 – 5000	Extremely fast drying and long pot-life. Superior mechanical properties and outdoor durability. 17% bio-based on solid content.	PATENTED
4000 – 6000	Very long pot-life and super-fast hardness development. Very good balance between hardness and flexibility, with excellent mechanical properties and superior outdoor durability.	PATENTED
3000 – 6000	Clear and top coats with very long pot-life and super-fast hardness development at room temperatures and forced drying.	PATENTED
6000 – 9000	Fast drying and very long pot-life, for high solid clear and top coats. Good cost-performance ratio.	PATENTED
4000 – 6000	Fast drying and very long pot-life, based on DOMACRYL 545, for clear and top coats.	PATENTED
3000 – 5000	Self-matting hydroxy acrylic resin with good balance between hardness and flexibility.	
2000 – 6000	Very good adhesion on plastic substrates (PP, PE, PVC) with good balance between hardness and flexibility.	

ACID VALUE on solid resin [mg KOH/g]	MFFT [°C]	DESCRIPTION
	30	Styrene-acrylic emulsion. Finishes and anticorrosion primers. APEO-free.
	45	Styrene-acrylic emulsion. Finishes and anticorrosion primers. APEO-free.
	18	Hydrophobic styrene-acrylic dispersion for anti-corrosive applications, stain locking primers and primers for enhanced exterior durability. Especially suitable for DTM. APEO-free.
	30	Fast drying acrylic emulsion. APEO-free.
20 – 30	0	Acrylic latex resin for effect pigmented based coats (metallic, pearlescent). APEO-free.
		OH-functional styrene-acrylic primary emulsion. Good gloss and adhesion to metal, suitable for DTM. Cost-efficient.
20 – 30		Standard acrylic secondary dispersion for 2K PUR aqueous clear and top coats. DTM.
35 – 45		Modified acrylic secondary dispersion. Very flexible. Good wet-on-wet application.
20 – 30		Acrylic secondary dispersion. Standard resin for 2K PUR systems. High gloss, without aromatic co-solvent.

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
2000 – 4000	Standard resin for fast air and forced drying primers and top coats.
2000 – 3000	Standard resin for fast air and forced drying primers and top coats.
1000 – 5000	Binder for low-yellowing solvent borne coatings. High solid resin in BAc for baking or NC coatings.
4400 – 5600	Fast air drying primers, putties and industrial finishes.
3000 – 4000	Fast drying anticorrosion paints and industrial finishes.
660 – 1000	Very fast surface and through drying with high gloss and resistance to yellowing.
5000 – 7000	Standard resin for paints, very good overall properties. Air and forced drying.
8000 – 12000	Standard resin with very good averall properties. Due to special fatty acids content very good drying properties, low yellowing by air drying.
2000 – 3000	Pigment pastes for combination with medium oil air-drying alkyd resins. Finishes with excellent weather resistance.
750 – 1250	Reactive resin for combination with melamine and alkyd resins. High reactivity.
4000 – 6000	Universal stove drying coatings in combination with melamine resin.
2500 – 3500	Industrial finishes in combination with DCO alkyd and melamine resins. Universal pigment pastes for NC and stoving finishes.

MODIFIED ALKYD SOLVENTBORNE 1K RESINS

RESIN	DELIVERY FORM	OIL LENGHT / OIL TYPE	MODIFICATION	ACID VALUE on solid resin [mg KOH/g]
DOMALKYD 6351	60 X	35% Soyabean FA	Epoxy ester	max. 4
DOMALKYD 6400	60 X	40% Soyabean FA	Epoxy ester	max. 4
DOMALKYD 7351	60 X	35% Soyabean FA	Aromatic urethane	6 – 15
DOMALKYD 7575	55 D-40	57% Soyabean FA	Aliphatic urethane	max.5
DOMALKYD 8372	60 X	37% Linseed, tung oil	Phenolic	13 – 25
DOMALKYD 8372	70 BAc	37% Linseed, tung oil	Phenolic	13 – 25
DOMALKYD 9314	60 X	31% Soyabean FA	Styrene	max. 10
DOMALKYD 9375	50 X	37% Soyabean FA	Acrylic / Styrene	max. 15



VISCOSITY 23 °C [mPa.s]	DESCRIPTION
8000 – 12000	Anticorrosion primers and finishes.
7000 – 10000	Anticorrosion primers, air or stove drying with melamine resins. Fast drying, excellent adhesion and hardness.
4000 – 7000	Fast drying enamels.
3000 – 4500	Non-yellowing enamels. Good outdoor durability.
2500 – 3500	Universal binder for anticorrosion primers. Excellent drying properties and adhesion.
5000 – 7000	Universal binder for anticorrosion primers. Excellent drying properties and adhesion.
1700 – 2700	Fast drying industrial primers and finishes for metal and radiator enamels, good recoatability.
2000 – 3000	Industrial primers and finishes. Very good moisture resistance.

ALKYD SOLVENTBORNE 2K RESINS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMALKYD 4284	70 X	max. 12	70 – 100
DOMALKYD 5261	70 BAc	max. 20	150 – 175
DOMALKYD 5331	75 BAc	6 – 10	140 – 160

ALKYD AND POLYESTER WATER REDUCIBLE RESINS

RESIN	DELIVERY FORM	OIL LENGHT / OIL TYPE	ACID VALUE on solid resin [mg KOH/g]
DOMALKYD 0246	70 BG	Epoxy modified	35 – 65
DOMALKYD 0261	70 PnB / 2B	29% Soyabean FA	35 – 45
DOMALKYD 0265	70 BG / 2B / PnB	30% Soyabean FA	30 – 35
DOMOPOL 5301	60 BG		24 – 28
DOMALKYD 0391	80 Wa / BG	38% Soyabean FA	40 – 50
DOMALKYD 0503	80 Wa	33% Mixed FA	40 – 50

ALKYD, POLYESTER EMULSIONS AND POLYURETHANE DISPERSIONS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	VISCOSITY 23 °C [mPa.s]
DOMALKYD 0460	38 Wa / MP		9000 – 15000
DOMALKYD 0545	40 Wa	max. 28	50 – 1000
DOMALKYD 0547	42 Wa	15 – 20	max. 10000
DOMOPOL 8037	35 WA / DMP	65 – 75	500 – 4000
DOMOPUR 0133	36 Wa	30 – 50	2000 – 8000

POLYESTER SOLVENTBORNE RESINS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	HYDROXYL VALUE on solid resin [mg KOH/g]
DOMOPOL 6046	100%	7 – 12	250 – 290
DOMOPOL 7046	100%	7 – 12	250 – 290
DOMOPOL 6052	80 Bac	max. 3	150 – 200
DOMOPOL 6067	80 BAc	max. 2	130 – 160
DOMOPOL 6068	60 X	17 – 25	80 – 120
DOMOPOL 6115	100%	max. 3	140 – 160
DOMOPOL 6181	75 X	max. 15	145 – 180

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
4000 – 6000	Air and forced drying lacquers.
4000 – 6000	Air and forced drying lacquers, pigment pastes.
6000 – 10000	High grade industrial paints.

VISCOSITY 23 °C [mPa.s]	BIO-BASED CONTENT on solid resin [%]	DESCRIPTION
8000 – 22000	42 ISCC	Good pigment wetting, enhanced adhesion, rapid curing, good anticorrosion properties.
5000 – 15000	61 ISCC	Air drying and stoving primers and top coats.
15000 – 20000	62 ISCC	Air and forced drying primers and top coats. High corrosion resistance.
1300 – 2700		Milling resin. Water-thinnable after neutralization. Good pigment wetting and adhesion.
30000 – 60000	66 ISCC	Non-yellowing enamels. Good outdoor durability.
5000 – 35000	60 ISCC	Excellent pigment wetting and application properties. Without organic solvent.

pH	BIO-BASED CONTENT on solid resin [%]	DESCRIPTION
8.0 – 9.0	79 ISCC	Acrylic modified alkyd emulsion. Fast air drying, high gloss, excellent flow and very low-yellowing. Low VOC content.
7.0 – 8.0	60 ISCC	PU modified alkyd emulsion without organic solvents. Rapid air drying, high gloss and hardness, good water and chemical resistance. Approx. 1% hydroxyl content on solid resin.
7.5 – 8.5	60 ISCC	PU modified alkyd emulsion without organic solvents. Very rapid physical drying, high gloss and hardness.
7.0 – 9.0	14 ISCC	Acrylic modified saturated polyester emulsion for one-coat finishes or topcoats with good weathering resistance.
7.0 – 8.5	47	Aqueous polyurethane dispersion modified with unsaturated fatty acids for paints in spray cans.

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
750 – 1000	Used with hydroxyl acrylic resins to increase solids content of coatings.
750 – 1000	Used with hydroxyl acrylic resins to increase solids content of coatings. 100% bio-based on solid content.
1000 – 2000	For 2K polyurethane coatings as a combination resin for hydroxyl acrylic resins to increase solids content, improve flexibility and outdoor durability in industrial finishes, protective coatings and coatings for plastics.
1800 – 2600	2K PUR coatings.
2250 – 3250	Air drying 2K industrial coatings in combination with isocyanates.
2500 – 4500	Solvent-free polyester and polyether polyol, suitable for use in the formulation of 2K coatings. The coatings are tough and flexible, hard-wearing and chemical resistant.
6000 – 9000	2K PUR flexible and chemical resistant coatings, with good pigment wetting properties and high resistance to yellowing.

ADHESION PROMOTORS

RESIN	DELIVERY FORM	ACID VALUE on solid resin [mg KOH/g]	HYDROXYL VALUE on solid resin [mg KOH/g]
ADDITIVE EP024	73 Wa / BG	40 – 50	
ADDITIVE EP135	65 BG	110 – 140	
DOMOPOL 5100	60 X	20 – 30	~30
DOMOPOL 5144	60 X / BGAc	15 – 30	~30
DOMOPOL 5200	75 BAc	20 – 30	~95

2B = 2-Butanol, **APEO** = Alkylphenol ethoxylate, **BAc** = Butyl acetate, **BG** = Butylglycol, **BGAc** = Butylglycol acetate, **D-40** = Dearomatized white spirit, **DCO** = Dehydrated
FA = Fatty acid, **ISCC** = International Sustainability and Carbon Certification, **MP** = Methoxypropanol, **MPA** = Methoxy propyl acetate, **nB** = n-Butanol, **NC** = Nitrocellulose,

VISCOSITY 23 °C [mPa.s]	DESCRIPTION
5000 – 8000	Epoxy phosphate additive for waterborne stoving enamels. Improves adhesion and corrosion, chemical and stain resistance.
1500 – 3000	Epoxy phosphate additive for stoving enamels.
300 – 650	Adhesion improvement on aluminium, steel and galvanized steel.
1000 – 4500	Adhesion improvement on aluminium and steel; excellent hardness/flexibility ratio.
1000 – 2500	Adhesion improvement on aluminium, steel and galvanized steel; suitable for high solids coatings.

castor oil, **DMM** = Dipropylene glycol dimethyl ether, **DPM** = Dipropylene glycol monomethyl ether, **DTM** = Direct-to-metal, **EEP** = Ethyl 3-ethoxypropionate, **PnB** = Propylene glycol monobutyl ether, **SA** = Aromatic solvent 100, **W** = White spirit, **Wa** = Water, **X** = Xylene.

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