
# RESINS FOR WOOD AND PLASTIC COATINGS

HELIOS RESINS | ATCOAT

# HIGH-QUALITY RESINS FOR SUSTAINABLE COATING SOLUTIONS.

# WOOD AND PLASTIC

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

### GOLDEN RESINS

We produce around 70,000 tons of liquid resins annually, including coating and composite resins. Our coating resin brands – DOMACRYL, DOMOPOL, DOMALKYD, DOMEMUL, DOMOPUR, ATRESIN, ATRELUX and ATRETHIX – have achieved a strong market position and are trusted for their quality and performance. With the combined strength of two strong production companies, ATCOAT and Helios Resins, we serve more than 50 countries worldwide. Our production sites in Germany and Slovenia allow us to deliver our quality resins throughout Europe and beyond. A broad product portfolio, intensive R&D and innovation capabilities, high production flexibility, and superior customer service are the strengths of Helios Resins and ATCOAT as a joint specialist for synthetic resins.

### 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 Gold 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 can 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 and ATCOAT ensure 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. We produce tailormade resins for specific needs and offer support in developing customized applications.

## ACRYLIC WATERBORNE 1K EMULSIONS

| RESIN | DELIVERY FORM | VISCOSITY 23 °C [mPa.s] | pH |
|---|---|---|---|
| DOMEMUL AA 9673 | 42 Wa | 20 – 250 | 7.5 – 8.5 |
| DOMEMUL AA 9672 | 44 Wa | max. 150 | 7.5 – 9.5 |
| DOMEMUL AA 9670 | 40 Wa | 100 – 800 | 7.5 – 9.5 |
| DOMEMUL AA 7962 | 45 Wa | 20 – 250 | 6.0 – 8.0 |
| DOMEMUL AA 9674 | 41 Wa | 20 – 500 | 7.0 – 8.0 |
| DOMEMUL AA 9678 | 41 Wa | 20 – 500 | 7.0 – 8.0 |
| DOMEMUL AA 9679 | 41 Wa | 20 – 500 | 7.0 – 8.0 |
| DOMEMUL AA 7762 | 45 Wa | 20 – 350 | 7.5 – 8.5 |
| DOMEMUL AA 7764 | 45 Wa | 20 – 350 | 7.5 – 8.5 |
| DOMEMUL AA 7765 | 45 Wa | 20 – 350 | 7.5 – 8.5 |
| DOMEMUL AA 7777 | 47 Wa | 100-1000 | 7.0 – 9.0 |

## ACRYLIC WATERBORNE 2K EMULSIONS

| RESIN | DELIVERY FORM | HYDROXL CONTENT on solid resin [mg KOH/g] | VISCOSITY 23 °C [mPa.s] |
|---|---|---|---|
| DOMEMUL AA 9674 | 41 Wa | 50 – 60 | 20 – 500 |
| DOMEMUL AA 9678 | 41 Wa | 50 – 60 | 20 – 500 |
| DOMEMUL AA 9679 | 41 Wa | 50 – 60 | 20 – 500 |
| DOMACRYL 0769 | 45 Wa / BG / SA | 100 – 120 | 200 – 1000 |
| DOMACRYL 0724 | 45 Wa / PnB / SA | 125 - 145 | 200 – 1000 |

## ALKYD AND POLYURETHANE EMULSIONS

| 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 |
| DOMOPUR 0133 | 36 Wa | 30 – 50 | 2000 – 8000 |
| DOMOPUR 0215 | 35 Wa | | 20 – 100 |
| DOMOPUR 0235 | 40 Wa | | 20 – 180 |
| DOMOPUR 0411 | 35 Wa | | 20 – 300 |
| DOMOPUR 0632 | 38 Wa | | 10 – 500 |

## 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 | 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 |
| DOMACRYL 872 | 60 X | 8 – 12 | 10000 – 15000 |

| MFFT [°C] | BIO-BASED/RECYCLED CONTENT on solid resin [%] | DESCRIPTION |
|---|---|---|
| 7 | | Self-crosslinking acrylic emulsion for interior and exterior wood coatings. Fast drying and good anti-blocking. |
| 0 | | Core-shell acrylic emulsion for interior and exterior wood coatings. Good gloss. Co-resin for improving elasticity. |
| 0 | | Core-shell acrylic emulsion for interior and exterior wood coatings and joinery. Good anti-blocking. |
| 0 | | Core-shell acrylic emulsion for industrial waterborne wood coatings, interior and exterior, especially for furniture, joinery, decorative application with good chemical resistance, wetting, low-foaming, flow and transparency. |
| 50 | | Self-crosslinking acrylic emulsion with OH-functionality for industrial coatings for interior, especially for furniture and joinery non-yellowing enamels with good water, chemical and blocking resistance. |
| 50 | 10 | Based on DOMEMUL AA 9674 with 10% bio-based content. |
| 50 | 30 | Based on DOMEMUL AA 9674 with 30% recycled content. |
| 31 | | Self-crosslinking acrylic emulsion for waterborne industrial wood finishes, interior. Good chemical and mechanical resistance, wetting, low-foaming, flow and transparency. Hand cream resistance, fast drying and hardness. |
| 31 | 15 | Based on DOMEMUL AA 7762 with 15% bio-based content. |
| 31 | 38 | Based on DOMEMUL AA 7762 with 38% bio-based and recycled content. |
| 18 | | Hydrophobic acrylic dispersion for anti-corrosive applications, stain locking primers and primers for enhanced exterior durability. |

| pH | BIO-BASED/RECYCLED CONTENT on solid resin [%] | DESCRIPTION |
|---|---|---|
| 7.0 – 8.0 | | Self-crosslinking acrylic emulsion with OH-functionality for industrial coatings for interior, especially for furniture and joinery non-yellowing enamels with good water, chemicaland blocking resistance. |
| 7.0 – 8.0 | 10 | Based on DOMEMUL AA 9674 with 10% bio-based content. |
| 7.0 – 8.0 | 30 | Based on DOMEMUL AA 9674 with 30% recycled content. |
| 7.0 – 8.5 | | Standard secondary acrylic dispersion for medium OH PU coatings. |
| 7.0 – 8.0 | 12 | Acrylic secondary dispersion for 2K PU aq. systems. Excellent applicability, resistance and appearance in combination with water-emulsifiable polyisocyanates. |

| pH | BIO-BASED CONTENT on solid resin [%] | DESCRIPTION |
|---|---|---|
| 8.0 – 9.0 | 79 ISCC | Acrylic modified alkyd emulsion. Top coats and primers for wood or steel substrates.<br>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 – 8.5 | 47 | Aqueous PU dispersion modified with unsaturated fatty acids for paints in spray cans. |
| 7.0 – 8.5 | | Self-crosslinking PU WB dispersion for 1K or 2K parquet lacquers.<br>Non yellowing, high abrasion, chemical, black heel mark, and scratch resistance. |
| 7.0 – 8.5 | | PU dispersion compatible with acrylic polyols to boost performance of 2K PU aq. systems.<br>Offers higher gloss, chemical and UV resistance. |
| 7.0 - 9.0 | | PU dispersion based on polycarbonate polyol. Very good adhesion to plastic and wood substrates.<br>Offers high chemical, water and UV resistance. |
| 7.3 - 8.3 | | Aqueous acrylic modified PU dispersion for radiation curing coatings. Designed for coating of wood, paper and plastic substrates with good stain, scratch and abrasion resistance. |

| Tg [°C] | DESCRIPTION |
|---|---|
| 21 | Pigmented and transparent paints for plastics. Rapid drying. Also for aerosols. |
| 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 for plastic. Gasoline and plasticizers resistant. Also for aerosols. |
| 23 | Primers and top coats for plastics. Excellent toughness, rapid drying, high gloss and adhesion. |
| 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 5220 | 45 BAc / X | 6 – 12 | 30 – 40 |
| DOMACRYL 5213 | 50 BAc | 7 – 10 | 35 – 45 |
| DOMACRYL 5214 | 40 BAc | 15 – 20 | 35 – 45 |
| DOMACRYL 540 | 50 BAc | 5 – 10 | 40 – 50 |
| DOMACRYL 5269 | 51 MEK | max. 4 | 44 – 55 |
| DOMACRYL 5269 | 52 BAc | max. 4 | 45 – 55 |
| DOMACRYL 505 | 60 X / BAc | max. 5 | 45 – 55 |
| DOMACRYL 5353 | 58 X / BAc | max. 10 | 50 – 75 |
| DOMACRYL 504 | 60 X / BAc | max. 10 | 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 |
| DOMACRYL 5154 | 80 BAc | max. 10 | 60 – 80 |
| DOMACRYL 5267 | 60 MEK | max. 5 | 90 – 100 |

## 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% Tall oil FA | |
| 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 | 120 – 145 |
| DOMALKYD 4402 | 75 BAc | 3000 – 5000 | 40% Vegetable FA | |
| DOMALKYD 4411 | 75 BAc | 1800 – 2400 | 41% Soyabean FA | |
| DOMALKYD 5331 | 75 BAc | 6000 – 10000 | 33% Synthetic FA | 140 – 160 |
| DOMALKYD 5421 | 75 BAc | 2000 – 3500 | 42% Coconut FA | 150 – 200 |
| DOMOPOL 1352 | 100 % | 9000 – 13000 | Polyester polyol | 45 – 60 |
| DOMOPOL 6181 | 75 X | 6000 – 9000 | Polyester polyol | 145 – 180 |

## UV/EB CURABLE RESINS

| RESIN | DELIVERY FORM | VISCOSITY 23 °C [mPa.s] |
|---|---|---|
| DOMOPUR 0632 | 38 Wa | 10 - 500 |
| COLPOLY 755 U | 43 DPGDA | 4000 – 5500 |
| ATRELUX UV6154/54 BA | 54 BAc | 2500 - 4000 |
| ATRELUX UV100 | 100% | 40-60 sec. |
| ATRELUX UV1500 | 100% | 4000 - 6000 |

**AC** = Acid curing, **BAc** = Butyl acetate, **BG** = Butylglycol, **D-30** = Dearomatized white spirit, **DCO** = Dehydrated castor oil, **DPGDA** = Dipropylene glycol diacrylate, **DPM** = acetate, **NC** = Nitrocellulose, **PnB** = Propylene glycol monobutyl ether, **SA** = Aromatic solvent 100, **Wa** = Water, **X** = Xylene.

| VISCOSITY 23 °C [mPa.s] | DESCRIPTION |
|---|---|
| 2000 – 6000 | Very good adhesion on plastic substrates (PP, PE, PVC) with good balance between hardness and flexibility. |
| 3000 – 5000 | Very fast drying resin for wood coatings. |
| 1800 – 2400 | Very hard, used as additive resin in wood coatings. |
| 3000 – 5000 | Self-matting hydroxy acrylic resin for industrial wood two-pack polyurethane furniture. Good balance between hardness and flexibility. |
| 1800 – 3000 | Resin for industrial two-pack PU coatings with good adhesion on plastics. |
| 3000 – 5000 | Long pot-life. |
| 1400 – 2400 | Elastic resin for primers and top coats. |
| 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. |
| 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. PATENTED |
| 7000 – 11000 | Cost-efficient high-solid two-pack protective systems (top and clear coats) with good mechanical properties and outdoor durability. |
| 3000 – 5000 | Resin for industrial two-pack PU coatings with good adhesion on plastics. |

| 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. 4 | 2K PU 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. |
| 6 – 10 | 2K PU coatings for wood. |
| max. 10 | High quality NC and AC lacquers for wood, 2K PU lacquers for furniture. |
| 0 – 4 | Linear hydroxyl-bearing polyester resin used in 2K PU flexible solvent-free coatings and sealers. |
| max. 15 | 2K PU coatings for wood (parquet, boats). Good pigment wetting and chemical resistant properties. |

| DESCRIPTION |
|---|
| Aqueous acrylic modified PU dispersion for radiation curing coatings. Designed for coating of wood, paper and plastic substrates with good stain, scratch and abrasion resistance. |
| Unsaturated polyester resin for radiation curable putties, primers, and topcoats for different substrates, especially for wood. |
| Hydroxyl group containing polyacrylic acrylate, curing with isocyanate and radiation (dual cure), non-adhesive and scratch-resistant, for non-yellowing coatings. |
| Radiation curing polyester acyrylate, modified with natural fatty acids, for primers, top coats and fillers, good adhesion on wood, very low viscosity, suitable for printing inks. |
| Polyester acrylic resin for the formulation of UV and electron beam curing varnishes, lacquers, and paints. It is a nearly colourless resin with good reactivity. It forms elastic, scratch and chemical-resistant films with good adhesion properties even on plastic surface. |

Dipropylene glycol monomethyl ether, **FA** = Fatty acid, **ISCC** = International Sustainability and Carbon Certification, **MP** = Methoxypropanol, **MPA** = Methoxy propyl

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