

Portfolio Information

Adhesive Portfolio for the Furniture Industry



Edgebanding

Flat Lamination

Profile Wrapping

3D Lamination and Postforming

Doweling and Frame Construction

Upholstery and Mattress Manufacturing

Assembly and Packaging

Cleaning and Flushing



Our Word is Our Bond

Jowat
Adhesives 

Adhesives for the Furniture Industry

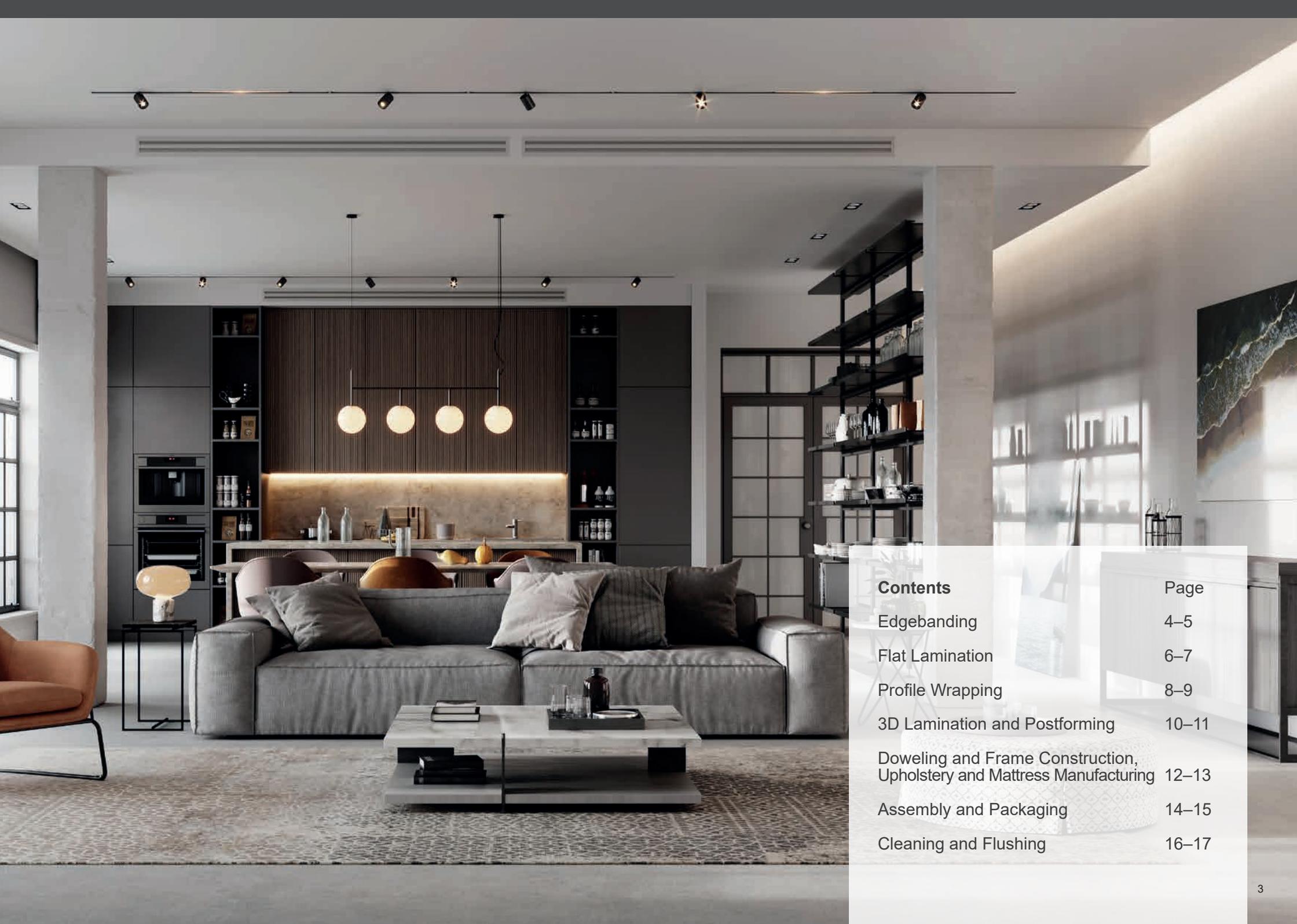
Always a Solution at Hand

The way a home is furnished can reveal a lot about the people living there. For example if they like to relax, enjoy cooking or love sociable get-togethers. Our way of living is closely connected with the furnishing and furniture industry.

Hardly any other industry combines such a wide range of contrasting expectations for design and functionality: retro chic and contemporary elegance, individuality and multi-functionality, serene retreats and convivial environments are all equally in vogue at the moment.

The requirements for high quality, outstanding appearance and functionality in the manufacture of superior and flexible furniture with a growing variety of materials and increasing manufacturing speeds can be fulfilled only with intelligent, powerful adhesives characterized by excellent performance in all stages of the process chain.





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Edgebanding

Edgebanding wood-based panels with a wide range of edgebands has been an established practice in the furniture industry for many decades. Quality expectations with regard to visual appeal, the technological progress in engineering and also a virtually unlimited material diversity—all of these factors present special challenges to the adhesive technology. In the modern production of superior furniture, the quality of edgebanding is increasingly becoming a key aspect when assessing the quality of the entire furniture item. End customers expect furniture with flawless and virtually invisible bondlines.

Modern thermoplastic and moisture-curing reactive adhesives facilitate top quality and flawless appearances in edgebanding applications. A broad spectrum of adhesion to different edgeband materials and fast adhesive setting are equally important for direct downline processing and high heat resistance plus durability. PUR hot melt adhesives are renowned for meeting the highest requirements for a zero-bondline appearance as well as resistance to heat, moisture and chemicals in kitchens and bathrooms.

These hot melt adhesives of the latest generation are also supplied by Jowat in the convenient granulate form, facilitating an easy transition to PUR technology for new processors. Jowat hot melt adhesives therefore provide the ideal process solution for every edgebanding application.



EVA Hot Melt Adhesives for Edgebanding

| | Based on | Appearance | Processing temp. [°C] | Oxidation stability | Heat resistance | Water resistance | Feed speed | Yield | Remarks |
|-------------------|----------|----------------------------|-----------------------|---------------------|-----------------|------------------|------------|-------|---|
| Jowatherm® 280.10 | EVA | yellow translucent, white | 190–210 (374–410°F) | ●●●○ | ●●○○ | ●●○○ | ●○○○ | ●●●● | high initial strength, for molded parts on BAZ, also for solid wood edges |
| Jowatherm® 280.30 | EVA | yellow translucent | 180–200 (356–392°F) | ●●●○ | ●●○○ | ●●○○ | ●●○○ | ●●●● | good bonding strength, also for BAZ and solid wood edges |
| Jowatherm® 280.50 | EVA | beige, white | 180–200 (356–392°F) | ●●○○ | ●●○○ | ●○○○ | ●●●● | ●●○○ | wide range of applications |
| Jowatherm® 282.20 | EVA | beige, white | 130–150 (266–302°F) | ●●○○ | ●○○○ | ●○○○ | ●○○○ | ●●○○ | for manual and entry-level machines, low processing temperature |
| Jowatherm® 284.70 | EVA | beige, white, brown, black | 190–210 (374–410°F) | ●●○○ | ●○○○ | ●○○○ | ●●○○ | ●○○○ | cost-optimized |
| Jowatherm® 286.30 | EVA | yellow translucent | 180–200 (356–392°F) | ●●●○ | ●○○○ | ●○○○ | ●●○○ | ●●●● | good bonding strength, for Holz-Her machines |
| Jowatherm® 288.60 | EVA | beige, white | 180–200 (356–392°F) | ●●○○ | ●●○○ | ●○○○ | ●●○○ | ●●○○ | cost-optimized, wide range of applications |

PUR Hot Melt Adhesives for Edgebanding

| | Based on | Appearance | Processing temp. [°C] | Crosslinking speed | Heat resistance | Water resistance | Feed speed | Yield | Remarks |
|----------------------------|----------|--------------------------|-----------------------|--------------------|-----------------|------------------|------------|-------|---|
| Jowatherm-Reaktant® 607.40 | PUR | beige, white, pure white | 130–150 (266–302°F) | ●○○○ | ●●●● | ●●●● | ●●●○ | ●●○○ | very wide range of applications also for Holz-Her machines |
| Jowatherm-Reaktant® 608.00 | PUR | colorless, white | 100–120 (212–248°F) | ●●○○ | ●●●● | ●●●● | ●●○○ | ●●●● | wide range of applications, good bonding strength, optical “zero joint” |

PO Hot Melt Adhesives for Edgebanding

| | Based on | Appearance | Processing temp. [°C] | Oxidation stability | Heat resistance | Water resistance | Feed speed | Yield | Remarks |
|------------------------|----------|------------|-----------------------|---------------------|-----------------|------------------|------------|-------|-------------------------------|
| Jowat-Toptherm® 237.10 | PO | beige | 180–200 (356–392°F) | ●●●○ | ●●●○ | ●●○○ | ●●●● | ●●○○ | wide range of applications |
| Jowat-Toptherm® 237.50 | PO | colorless | 190–210 (374–410°F) | ●●●● | ●●●○ | ●●○○ | ●●○○ | ●●●● | premium, optical “zero joint” |

Flat Lamination

Flat lamination is one of the oldest applications in the wood and furniture industry. In general, it involves the coating of a wood-based substrate with different decorative materials. The range of lamination materials is very wide, including resinated decor papers and veneers as well as thermoplastic foils or pressure laminates such as HPL and CPL. Wood-based panels laminated with a decorative surface material have become the state of the art. They are used in multitude of applications in the furniture, door and flooring industries as well as for the construction of exhibition stands and shop fittings.

The extremely wide variety of material combinations and the high quality expectations require powerful adhesives.

In addition to PVAc dispersion adhesives and UF adhesives, moisture-curing PUR hot melt adhesives have also increasingly been becoming a product of choice due to their excellent resistance to heat and moisture.

Jowat supplies a comprehensive portfolio of different adhesives for flat lamination to meet customer requirements in the best possible way.



PUR Hot Melt Adhesives for Flat Lamination

| | Based on | Viscosity [mPas] | Processing temp. [°C] | Open time [min] | Initial strength | Range of adhesion | Certificate | Remarks |
|-----------------------------------|----------|------------------------------|------------------------|---------------------------|------------------|-------------------|-------------|---|
| Jowatherm-Reaktant® 609.00 | PUR | ~ 15,000 at 120°C (248°F) | 110–130 (230–266°F) | ~ 4 at 120°C (248°F) | ●●● | ●●● | A.1/3.18 e | high initial strength, reduced hot tack for good repositioning |
| Jowatherm-Reaktant® 609.30 | PUR | ~ 15,000 at 120°C (248°F) | 110–130 (230–266°F) | ~ 3 at 120°C (248°F) | ●●○ | ●●○ | A.1/3.18 e | classic choice for universal applications |
| Jowatherm-Reaktant® 609.31 | PUR | ~ 14,000 at 120°C (248°F) | 110–130 (230–266°F) | ~ 3 at 120°C (248°F) | ●●○ | ●●○ | - | universal applications, enhanced pot life for high humidity processing environments |
| Jowatherm-Reaktant® 609.40 | PUR | ~ 7,500 at 120°C (248°F) | 100–120 (230–248°F) | ~ 2 at 120°C (248°F) | ●●○ | ●●○ | - | low application temperature, for laminating high-gloss foils |
| Jowatherm-Reaktant® 609.50 | PUR | ~ 27,500 at 120°C (248°F) | 120–140 (248–284°F) | ~ 1,5 at 120°C (248°F) | ●●● | ●●○ | - | high initial strength for high-tension bonding |
| Jowatherm-Reaktant® 609.60 | PUR | ~ 27,500 at 120°C (248°F) | 110–130 (230–266°F) | ~ 8 at 120°C (248°F) | ●●● | ●●○ | - | high initial strength for high-tension substrates, long open time |

Dispersion Adhesives for Flat Lamination

| | Based on | Viscosity [mPas] | Open time [min] | Durability class | Remarks |
|-------------------------|-----------|----------------------------|-------------------------|------------------|--|
| Jowacoll® 103.40 | PVAc | ~ 11,000 at 20°C (68°F) | 4–8 at 20°C (68°F) | Interior | “all-rounder” |
| Jowacoll® 107.50 | PVAc | ~ 6,000 at 20°C (68°F) | 6–8 at 20°C (68°F) | D3 | high heat and water resistance, ideal for retail furniture applications |
| Jowacoll® 124.50 | PVAc | ~ 5,000 at 20°C (68°F) | 10–20 at 20°C (68°F) | Interior | for cold pressing of HPL and veneer |
| Jowacoll® 124.58 | PVAc | ~ 2,500 at 20°C (68°F) | 8–12 at 20°C (68°F) | Interior | especially designed for cold stack (no press) lamination of high pressure laminate (HPL) |
| Jowacoll® 148.50 | copolymer | ~ 2,000 at 20°C (68°F) | 2–3 at 20°C (68°F) | - | low viscosity „all-rounder“, good application by spraying |
| Jowacoll® 148.55 | copolymer | ~ 5,000 at 20°C (68°F) | 5–6 at 20°C (68°F) | - | “all-rounder” for foil lamination |
| Jowacoll® 148.90 | copolymer | ~ 2,500 at 20°C (68°F) | 6–7 at 20°C (68°F) | - | long open time, good adhesion to coated surfaces |

UF Adhesives for Flat Lamination

| | Based on | Min. pressing temperature [°C] | Pot life [h] | Pressing time [s] | Remarks |
|----------------------|-----------|--------------------------------|-----------------------|---------------------------|--|
| Jowat® 950.20 | UF resin | 70 (158°F) | ~ 7 at 20°C (68°F) | ~ 60 at 100°C (212°F) | low-emission bonding in E1 quality, hot curing |
| Jowat® 950.40 | MUF resin | 20 (68°F) | ~ 4 at 20°C (68°F) | ~ 150 at 100°C (212°F) | high water resistance, also cold curing |

Profile Wrapping

Profile Wrapping

Profile wrapping has been an established application in the wood and furniture industry for many years. A wide variety of decor papers, thermoplastic foils, pressure laminates (e.g. CPL) and veneers are being used for wrapping different carrier substrates such as wood and wood-based materials, but increasingly also plastic, aluminum and other metals. This multitude of material combinations, the modern machine technology with ever faster feed speeds and the demand for flawless quality present great challenges for the adhesives used in these applications.

Modern thermoplastic and moisture-curing hot melt adhesives are renowned for facilitating high quality results, outstanding heat resistance and durability in profile wrapping applications and provide a broad spectrum of adhesion for a broad spectrum of material combinations. If above-average resistance to water and heat resistance are required of the end product, there is no way around moisture-curing PUR hot melt adhesives.

Jowat's broad portfolio of thermoplastic EVA and PO hot melt adhesives plus reactive PUR hot melt adhesives supplies ideal process solutions to meet all customer requirements in the best possible way.



PUR Hot Melt Adhesives for Profile Wrapping

| | Based on | Viscosity [mPas] | Processing temperature [°C] | Feed speed | Initial strength | Range of adhesion | Remarks |
|----------------------------|----------|------------------------------|-----------------------------|------------|------------------|-------------------|---|
| Jowatherm-Reaktant® 604.20 | PUR | ~ 41,500 at 140°C (284°F) | 120–140 (248–284°F) | ● ● ● | ● ● ● | ● ● ● | premium, for plastic profiles (e.g. windows), rapid crosslinking allows immediate shipping of wrapped components, RAL certified |
| Jowatherm-Reaktant® 604.35 | PUR | ~ 25,000 at 140°C (284°F) | 110–140 (230–284°F) | ● ● ○ | ● ● ○ | ● ● ● | standard, for plastic profiles (e.g. windows), RAL certified |
| Jowatherm-Reaktant® 605.62 | PUR | ~ 30,000 at 140°C (284°F) | 130–150 (266–302°F) | ● ● ● | ● ● ● | ● ● ● | universal, enhanced initial strength |
| Jowatherm-Reaktant® 605.65 | PUR | ~ 37,500 at 140°C (284°F) | 130–150 (266–302°F) | ● ● ○ | ● ● ○ | ● ● ○ | universal, for thin foils |
| Jowatherm-Reaktant® 608.00 | PUR | ~ 90,000 at 120°C (248°F) | 130–150 (266–302°F) | ● ● ● | ● ● ● | ● ● ● | specialty, highest initial strength |

PO Hot Melt Adhesives for Profile Wrapping

| | Based on | Viscosity [mPas] | Processing temperature [°C] | Heat resistance | Feed speed | Initial strength | Range of adhesion | Remarks |
|------------------------|----------|------------------------------|-----------------------------|-----------------|------------|------------------|-------------------|--|
| Jowat-Toptherm® 221.00 | PO | ~ 23,200 at 200°C (392°F) | 180–200 (356–392°F) | ● ● ● | ● ● ● | ● ● ● | ● ● ● | wide range of adhesion, for high feed speeds |
| Jowat-Toptherm® 221.60 | PO | ~ 11,550 at 200°C (392°F) | 180–200 (356–392°F) | ● ● ● | ● ● ○ | ● ● ● | ● ● ● | „all-rounder“ with high heat resistance |
| Jowat-Toptherm® 224.10 | PO | ~ 9,000 at 180°C (356°F) | 170–190 (338–374°F) | ● ● ○ | ● ● ● | ● ● ○ | ● ● ○ | short open time, for thin papers and foils |
| Jowat-Toptherm® 236.50 | PO | ~ 8,000 at 200°C (392°F) | 180–200 (356–392°F) | ● ● ● | ● ● ○ | ● ● ○ | ● ● ○ | low viscosity for thin foils, hard glueline |

EVA Hot Melt Adhesives for Profile Wrapping

| | Based on | Viscosity [mPas] | Processing temperature [°C] | Heat resistance | Feed speed | Initial strength | Range of adhesion | Remarks |
|-------------------|----------|------------------------------|-----------------------------|-----------------|------------|------------------|-------------------|--|
| Jowatherm® 280.30 | EVA | ~ 50,500 at 200°C (392°F) | 180–200 (356–392°F) | ● ● ● | ● ● ○ | ● ● ● | ● ● ● | for veneers and kraft paper |
| Jowatherm® 291.10 | EVA | ~ 6,200 at 200°C (392°F) | 180–200 (338–374°F) | ● ● ○ | ● ● ○ | ● ● ○ | ● ● ○ | „all-rounder“ for thin foils and reverse priming, medium open time |
| Jowatherm® 291.60 | EVA | ~ 9,700 at 180°C (356°F) | 170–190 (338–374°F) | ● ● ○ | ● ● ○ | ● ● ○ | ● ● ○ | „all-rounder“ for thin foils, short open time |

3D Lamination and Postforming

3D Lamination

Laminated 3D furniture fronts are strongly influenced by the latest trends in the furniture industry. If the trend goes towards profiled surfaces in which contoured wood-based materials are generally laminated with classic PVC foils, the technology of choice are dispersion adhesives based on polyurethane. The Jowapur® product line provides a broad portfolio of one- and two-component PU dispersion adhesives which can be reactivated at relatively low temperatures and are characterized by high initial strengths.

Processors of Jowapur® adhesives benefit from a number of advantages. The prevention of mixing and dosage mistakes is certainly one of the key arguments in their favor. However, this technology provides even more benefits such as simplified planning, material procurement and storing, less cleaning and no requirement to observe a pot life.

Two-component Jowapur® adhesives, on the other hand, provide a wide range of adhesion due the flexible addition of a crosslinking agent. The amount added can be individually adapted to the lamination materials and to the specific bonding requirements.

Polyurethane dispersion adhesives from the Jowapur® product line have been an established and reliable bonding solution which can cover all requirements for the lamination of 3D furniture fronts.

Postforming

Whether superior aspect or functionality requirements—a flawless joint between the surface and the edge is imperative for certain furniture items and interior finishing elements. In postforming, a decorative edging material is wrapped around an already laminated and profiled carrier substrate to manufacture a rounded front edge for kitchen counters, windowsills and other furniture components.

Moisture-curing PUR hot melt adhesives are renowned for excellent heat and moisture resistance and are of increasing significance in post-forming operations in addition to PA and PO hot melts.



PU Dispersion Adhesives for 3D Lamination

| | Based on | Type | Viscosity [mPas] | Solids content [%] | Reactivation temperature [°C] | Addition of cross-linking agent | Remarks |
|-------------------------------|----------|-------------|---------------------------|--------------------|-------------------------------|---------------------------------|---|
| Jowapur® 150.90 Series | PU | 1-component | ~ 3,000 at 20°C (68°F) | ~ 41 | ≥ 55 (≥ 131°F) | - | self-crosslinking, all purpose available in white or blue color |
| Jowapur® 150.50 Series | PU | 1-component | ~ 3,000 at 20°C (68°F) | ~ 40 | ≥ 60 (≥ 140°F) | - | self-crosslinking, all purpose, available in white or blue color |
| Jowapur® 151.10 Series | PU | 2-component | ~ 1,700 at 20°C (68°F) | ~ 43 | ≥ 60 (≥ 140°F) | 5 %–10 % Jowat® 195.00 | 2 components, all purpose, available in white or blue color |

Hot Melt Adhesives for Postforming Applications

| | Based on | Viscosity [mPas] | Processing temperature [°C] | Heat resistance | Feed speed | Initial strength | Range of adhesion | Remarks |
|-----------------------------------|----------|------------------------------|-----------------------------|-----------------|------------|------------------|-------------------|--|
| Jowatherm® 211.55 | PA | ~ 6,500 at 190°C (374°F) | 170–190 (338-374°F) | ●●● | ●●● | ●●○ | ●●○ | classic and direct postforming, also cavity sealing |
| Jowat-Toptherm® 223.00 | PO | ~ 36,300 at 200°C (392°F) | 180–200 (356-392°F) | ●●● | ●●● | ●●○ | ●●○ | direct postforming, e.g. for kitchen work tops |
| Jowatherm-Reaktant® 606.60 | PUR | ~ 85,000 at 160°C (320°F) | 140–160 (284-320°F) | ●●● | ●●○ | ●●○ | ●●● | direct postforming and edge bonding |

Doweling and Frame Bonding

Doweling and Frame Construction

Doweling glues of the Jowacoll® product family are special dispersion adhesives developed with a focus on fully automated industrial machines with nozzle applicators used for processing hard and soft wood species or wood-based materials. These dispersions have been developed precisely to meet the requirements of modern processing stations—from low-viscosity dispersion adhesives for optimized application on horizontal application on dowel pressing units, to paste-like product variants for vertical overhead application on assembly lines. The adhesive forms a tough-elastic glue film. Special additives in the formulation prevent adhesive build-up at the nozzle tips to ensure an efficient, flawless application in fast industrial processes.

Frame bonding operations often require a fast setting product with a wide range of adhesion, also to difficult substrates. PVAc dispersion adhesives developed specifically for this application are available for this application, too.

Upholstery and Mattress Manufacturing

The upholstered furniture industry is characterized by an extraordinarily wide variety of materials. For example cold and molded foams, textiles, leather, wood and wood-based materials, different plastics, and many more. Manufacturing processes frequently involve manual operations and widely varying process times.

A good mattress is the foundation of a good night's sleep and recuperation. Adhesives are used in a wide range of applications in the manufacture of all kinds of mattresses, whether innerspring or foam. The adhesive not only has to ensure the reliable and permanent bonding of the different components, it plays a direct role in comfort and health, too. And it has to meet different quality standards, e.g. in accordance with Oeko-Tex® 100, LGA, the Blue Angel, or other specifications by the manufacturer. In addition, high-quality hot melt adhesives reduce the noise formation of the mattress and ensure quiet nights.

Dispersion Adhesives for Doweling

| | Based on | Viscosity [mPas] | pH value | Remarks |
|------------------|----------|---------------------------|----------|---|
| Jowacoll® 110.60 | PVAc | ~11,500 at 20°C (68°F) | ~ 4.5 | fast binder, tough elastic glue film, good penetration, manual |
| Jowacoll® 114.60 | PVAc | ~ 125 at 20°C (68°F) | ~ 4.5 | automatic dowelling, horizontal |

Dispersion Adhesives for Frame Construction

| | Based on | Viscosity [mPas] | Open time [min] | pH value | Durability class | Remarks |
|------------------|----------|----------------------------|-----------------|----------|------------------|--|
| Jowacoll® 103.40 | PVAc | ~ 12,000 at 20°C (68°F) | ~ 8–10 | ~ 4–5 | | universal, slow setting |
| Jowacoll® 107.50 | PVAc | ~ 6,000 at 20°C (68°F) | ~ 6–8 | ~ 3 | D3 | universal, slow setting, water resistant |
| Jowacoll® 110.60 | PVAc | ~ 11,500 at 20°C (68°F) | ~ 2–6 | ~ 4.5 | D2 | fast binder |
| Jowacoll® 114.60 | PVAc | ~ 125 at 20°C (68°F) | - | ~ 4.5 | - | horizontal doweling |

Solvent-Based Adhesives for Upholstery and Foam Bonding

| | Based on | Viscosity [mPas] | Solids content [%] | Open time [min] one-sided application | Open time [min] two-sided application | Remarks |
|---------------------------|----------|-------------------------|--------------------|--|--|------------------------------------|
| Jowatac-HighSolid® 471.64 | SBS | ~ 800 at 20°C (68°F) | ~ 63 | 1–7 | 1–25 | basic grade, high initial strength |

Adhesives for the Assembly of Pocket Innerspring Mattresses

| | Based on | Viscosity [mPas] | Processing temperature [°C] | Open time [s] | Remarks |
|-------------------|----------|-----------------------------|-----------------------------|--|--|
| Jowatherm® 261.65 | EVA | ~ 4,200 at 160°C (320°F) | 140–170 (284–338°F) | ~ 5 at 160°C (320°F) (2 mm bead) | “all-rounder,” automatic and semi- automatic units, horizontal and vertical application |

Assembly Bonding

The variety of different materials used in furniture manufacturing and interior finishing is enormous. This also leads to many possible variations in manufacturing procedures. The joining of different materials, whether for the purpose of permanent bonding, production-related affixing or implementation of added functionality, requires modern adhesive systems. The spectrum of requirements ranges from the simple affixing to high-performance bonding in special applications. Jowat has taken up those challenges and has established adhesives in different applications.

From the bonding of difficult surfaces, to applications with long open times and to the processing hot melt adhesives with very low viscosity—Jowat's portfolio of assembly adhesives for the manufacture of furniture and interior finishing elements provides the right product for all requirements.

Cardboard Bonding

Robust packaging prevents damage to the furniture and interior finishing elements during its journey from the manufacturer to the store and to consumer. Therefore, the packaging must be able to withstand the most extreme conditions during transport. Whether by truck over difficult roads in the northernmost regions of the planet through the cold winter, or in a shipping container exposed to the blistering summer sun for several weeks at sea to the heat of deserts. Powerful Jowat hot melt adhesives demonstrate their strengths in these challenges and have therefore been widely established in the furniture and interior finishing industry for decades.

Adhesives for Assembly Bonding

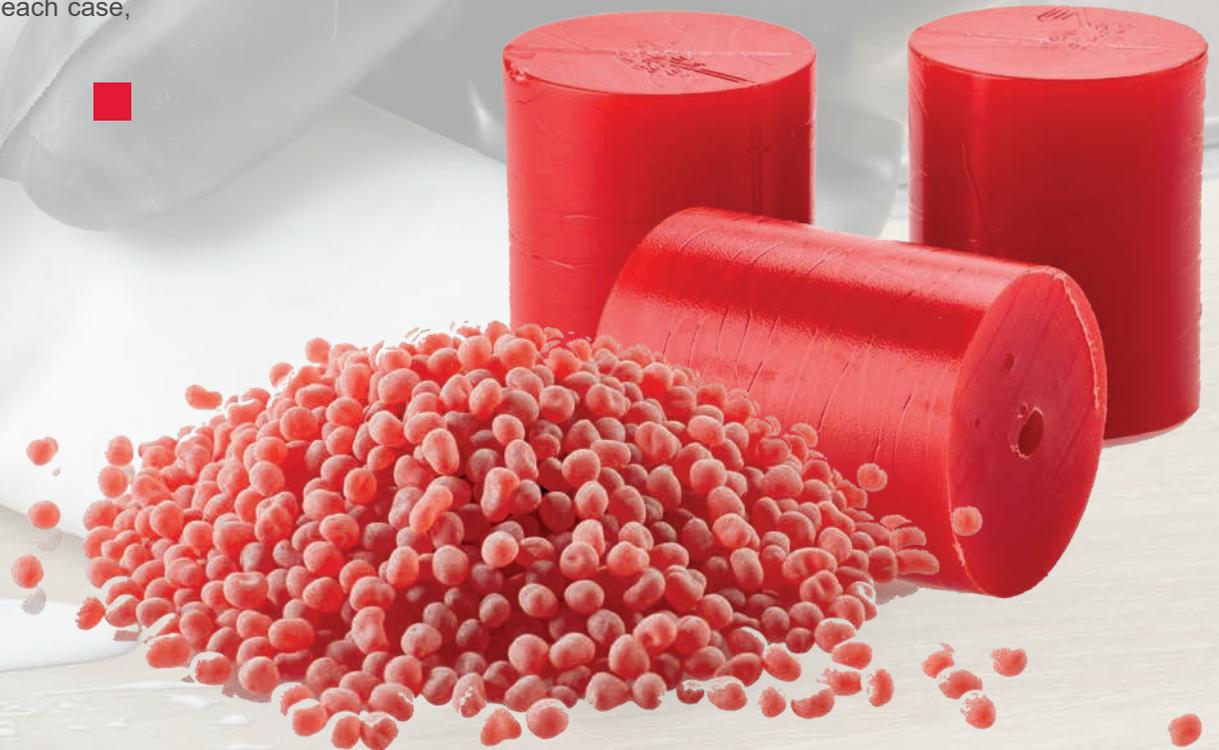
| | Based on | Viscosity [mPas] | Processing temperature [°C] | Open time [s] | Remarks |
|--------------------------|------------------------|-----------------------------|-----------------------------|-------------------------|---|
| Jowatherm® 266.00 | EVA | ~ 6,250 at 180°C (356°F) | 177-205 (350-400°F) | ~53 at 177°C (350°F) | medium viscosity, long open time, medium setting time |
| Jowatherm® 856.40 | EVA | ~ 1,450 at 190°C (374°F) | 160-190 (320-374°F) | ~14 at 177°C (350°F) | universal grade, short setting time |
| Jowapur® 686.25 | 1-comp. PUR prepolymer | ~ 9,000 at 20°C (68°F) | >10°C (>50°F) | 20 min | very high resistance to water and heat, very wide range of adhesion |

Hot Melt Adhesives for Packaging Bonding

| | Viscosity [mPas] | Processing temperature [°C] | Open time [s] | Short pressing times and high restoring forces | Clean processing | Demanding surfaces | Heat resistance | Cold resistance | Remarks |
|-------------------------------|-----------------------------|-----------------------------|---------------|--|------------------|--------------------|-----------------|-----------------|-------------------|
| Jowat-Toptherm® 256.40 | ~ 1,050 at 160°C (320°F) | 140–180 (284–356°F) | ~ 5 | ●●●○ | ●●●○ | ●●●○ | ●●●○ | ●●●○ | gold standard |
| Jowatherm® 856.40 | ~ 1,450 at 190°C (374°F) | 160–190 (320–374°F) | ~ 14 | ●●●○ | ●●●○ | ●●●○ | ●●●○ | ●●●○ | long open time |
| Jowatherm® 857.40 | ~ 1,700 at 160°C (320°F) | 150–180 (302–356°F) | ~ 8 | ●●●○ | ●●●○ | ●●●○ | ●●●○ | ●●●○ | clean runner |
| Jowatherm® GROW 853.40 | ~ 1,375 at 120°C (284°F) | 120–140 (284–284°F) | ~ 6 | ●●●○ | ●●●○ | ●○○○ | ●●●○ | ●●●○ | bio-based & clean |

Cleaners and Flushing Agents

In addition to a wide range of bonding solutions from different adhesive systems, Jowat also provides special service products. The subsequent cleaning should be just as regular and natural as the adhesive application itself. Jowat recommends a combination of flushing processes and cleaning by hand, although the exact procedures depend on the type of machine and adhesive in use. To achieve optimum results in each case, Jowat offers the perfect cleaning products.



Cleaners for PUR Hot Melt Adhesives

| | Processing temperature [°C] | Appearance | Softening range [°C] | Soaking time [min] | Supply form | GHS labeling | Remarks |
|----------------------|-----------------------------|------------|----------------------|--------------------|-------------------|--------------|---|
| Jowat® 930.22 | 120–140 (248–284°F) | white | ~ 55 (131°F) | 30 | powder (solid) | - | good price-performance ratio, for cleaning wide roller applicator systems |
| Jowat® 930.65 | 100–150 (212–302°F) | colorless | - | 50 | fluid | - | for cleaning heavily soiled roller applicator systems (RollerCoater), cleaning duration depending |

Flushing Agents for PUR Hot Melt Adhesives

| | Viscosity [mPas] | Processing temperature [°C] | Appearance | Supply form | Flushing effect in the tank | Flushing effect in the hose | Remarks |
|----------------------|------------------------------|-----------------------------|--------------|--------------------|-----------------------------|-----------------------------|---|
| Jowat® 930.34 | ~ 10,000 at 120°C (248°F) | 100–140 (212–284°F) | red | granulate block | ●●○ | ●●○ | application: viscosity up to approx. 15,000 mPa |
| Jowat® 930.74 | ~ 20,000 at 120°C (248°F) | 100–140 (212– 284°F) | red | granulate block | ●●○ | ●●○ | application: viscosity of 15,000 - 40,000 mPas |
| Jowat® 930.84 | ~ 25,000 at 100°C (212°F) | 100–150 (212–302°F) | orange / red | granulate block | ●●● | ●○○ | very good dissolving of adhesive residues application: viscosity up to approx. 20,000 mPas |
| Jowat® 930.94 | ~ 53,000 at 140°C (284°F) | 130–150 (266–302°F) | red | granulate block | ●○○ | ●●● | application: viscosity of 35,000 - 100,000 mPas |

Jowat - Our Word is Our Bond

Jowat SE with headquarters in Detmold, Germany is one of the leading suppliers of industrial adhesives. These are mainly used in woodworking and furniture manufacture, in the paper and packaging industry, for graphic arts, in the textile, automotive as well as in the electrical industry. The company was founded in 1919 and has manufacturing sites in Germany in Detmold and Elsteraue, plus three other producing subsidiaries, Jowat Corporation in the USA, Jowat Swiss AG and Jowat Manufacturing in Malaysia. Our North

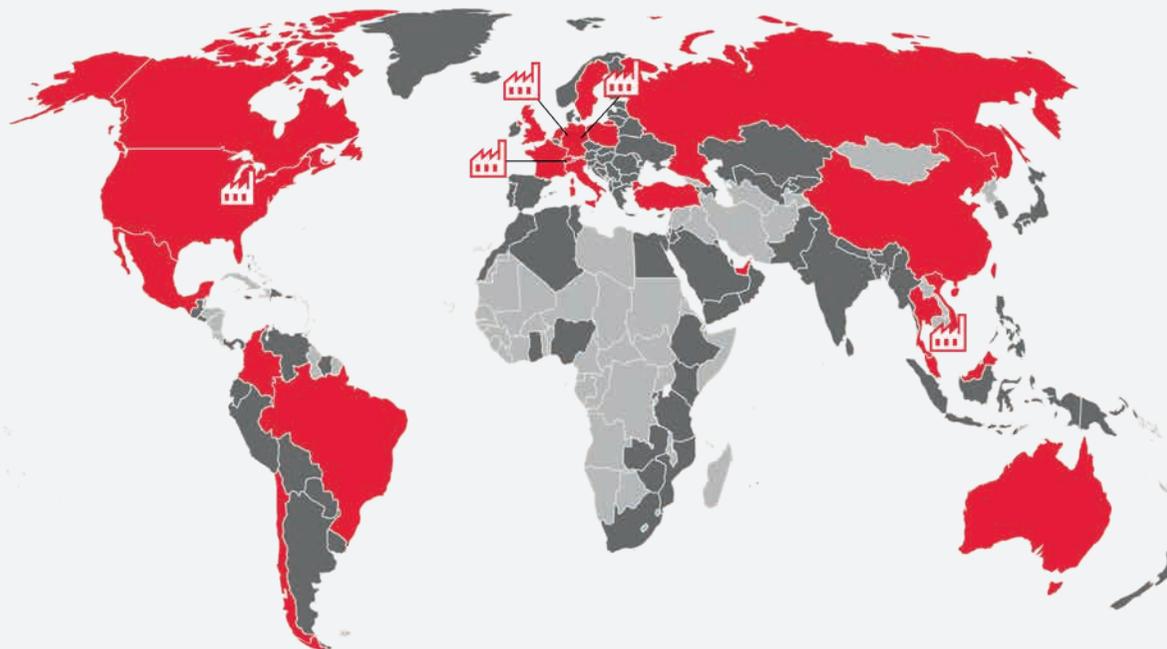
American manufacturing facility, based in High Point, NC, manufactures a complete spectrum of industrial adhesive. Our extensive warehouse and distribution network ensures that our adhesives are strategically located within a 1-2 day shipping point for every major market in North America. Moreover, in the whole Americas, from Canada to Argentina, other Jowat subsidiaries are being supplied with adhesives made in the US.



One of Jowat's producing subsidiaries:
Jowat Corporation in the USA

Have We Sparked Your Interest?

Jowat actively supports innovations in the wood and furniture industry and draws on a deep understanding of the challenges in the industry—be it special physical properties, different material combinations, requirements for high resistance and durability, or energy- and cost-efficiency as well as an increasing range of applications.



-  Manufacturing locations
-  Markets with Jowat Group companies
-  Markets with Jowat distribution partners

We provide a comprehensive advisory service and competent know-how for the entire process: From the continual search for and testing of new, sustainable raw materials, to the development of innovative adhesive products in close contact with sub-suppliers and processors, to application-related support, and to individual process analyses. For many years, Jowat has played a key role in safeguarding success and protecting investments by providing adhesive solutions for the wood and furniture industry which facilitate the optimization of products and processes.

Have we sparked your interest? Contact us!
We look forward to working together.

The information given in this leaflet is based on test results from our laboratories as well as on experience gained in the field, and does in no way constitute any guarantee of properties. Due to the wide variety of different applications, substrates, and processing methods that are beyond our control, no liability may be derived from these indications nor from the information provided by our free technical advisory service. Before processing, please request the corresponding data sheet and observe the information in it. Customer trials under everyday conditions, testing for suitability in normal processing conditions, and appropriate fit-for-purpose testing are absolutely necessary. For the specifications and for further information, please refer to the latest technical data sheets.



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