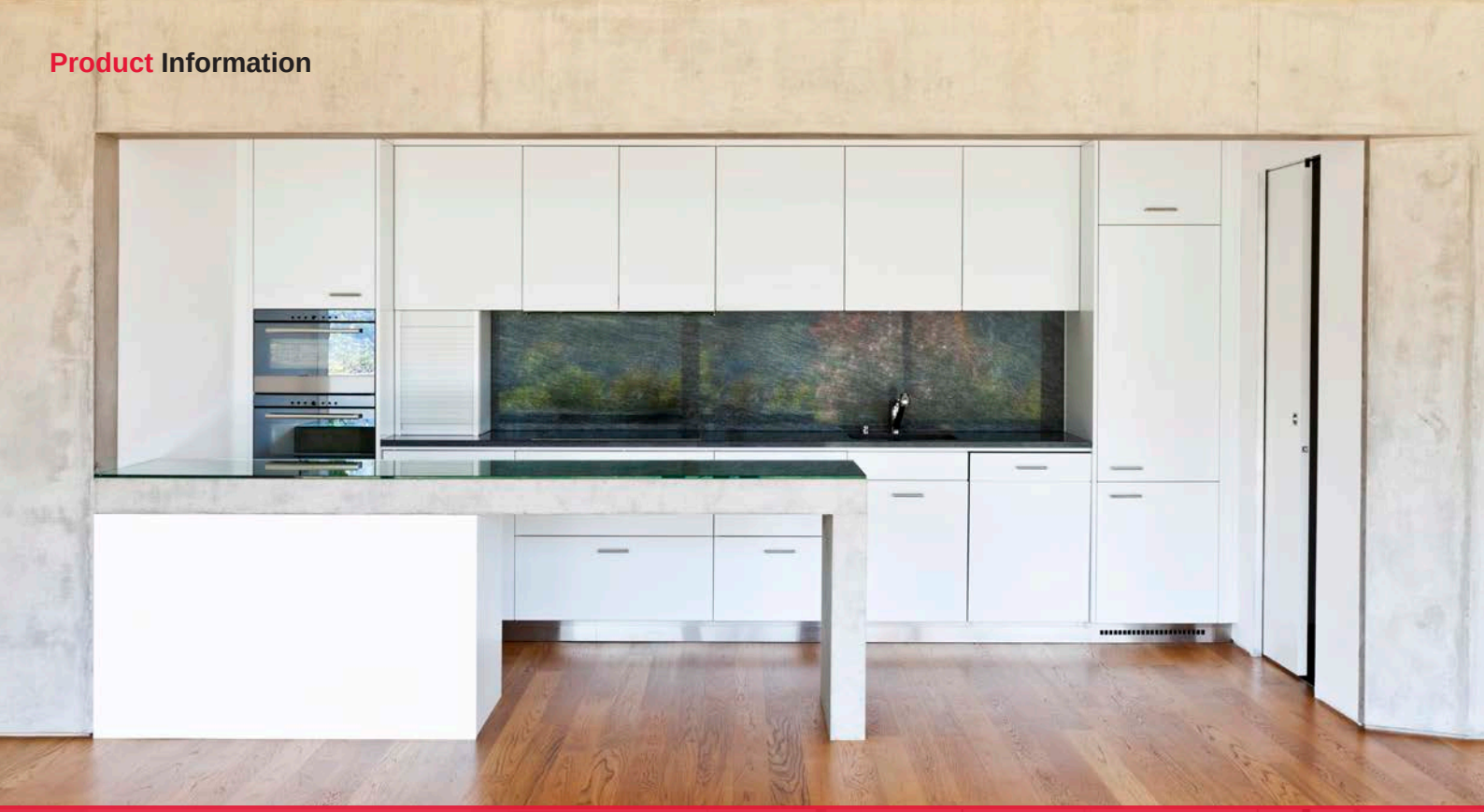


Jowatherm-Reaktant®
Flat lamination

Polyurethane hot melt adhesives (PUR HM) for flat lamination

Modern adhesive portfolio with solutions for all process requirements

Highest moisture and heat resistance

Suitable for different substrate-foil combinations incl. high-gloss furniture fronts

Jowat Klebstoffe

INFO: PUR hot melt adhesives MR

Monomer isocyanates are released when the uncrosslinked adhesive is exposed to heat. These isocyanates can have a sensitising effect on employees. It is therefore recommended to always have a proper extraction system installed on PUR hot melt processing units. Polyurethane hot melt adhesives with a considerably reduced content of free, monomer isocyanate (less than 0.1 %) have been developed for numerous different applications. These formulations are called monomer-reduced. Products from the Jowatherm-Reaktant® MR (monomer-reduced) series are not classified as hazardous, and significantly reduce the risk of sensitisation.
Due to a formulation based on completely different raw materials and components, MR adhesives can have a slightly different performance compared to conventional PUR adhesives. However, this does not make MR adhesives less powerful, however.

Jowatherm-Reaktant® - Flat lamination

PUR hot melt adhesives for flat lamination

For many years, flat lamination applications have been a growth market in the wood and furniture industry with constantly increasing requirements for manufacturing processes as well as for the used adhesives.
In the manufacture of modern furniture, wood-based panels are surface-laminated with the most diverse materials. Frequently used materials are resinated decor foils, veneers, as well as thermoplastic foils, CPL and HPL. The finished panels have numerous different applications: from the kitchen and home furniture to general interior fittings and floorings, the shipbuilding and caravan industries, as well as for exhibition displays and shopfitting. Decoratively laminated panels and profiles are the current state of the art.
Polyurethane hot melts have been established in the market for many years and are the products of choice for applications which require a superior bonding quality.

The highest strength and durability classes, for instance for kitchen and bathroom cabinets, can be achieved with the moisture-resistant polyurethane hot melt adhesives. Especially for modern high-gloss surfaces based on thermoplastic foils, PUR hot melts are the products of choice.

They are convincing due to their low processing temperatures, an excellent adhesion to difficult to bond substrates, and their superior long-term durability.

In flat lamination, a crucial factor for quality is a smooth and even surface appearance. Any slight or more pronounced surface swelling of the wood-based substrate is prevented when using hot melt adhesives (they have a solids content of 100 %). The most important factor for a visually appealing and smooth surface that is a thin and at the same time resistant, hard bondline. Highest surface quality and low VOC emissions are outstanding performance factors of these adhesives.

The completely revised PUR hot melt portfolio of Jowat for flat lamination provides the optimal solution for every requirement of our customers.

Technical Information

Applications

For laminating wood-based, plastic and metal substrates with thermoplastic foils (e.g. PVC, PMMA, ABS, PET), pressure laminates (e.g. CPL, HPL), resinated decor papers (e.g. finish foils) or veneer.

Directions for use

Polyurethane hot melts for profile wrapping are applied by roller or slot nozzle. All machine parts of the melting unit and the application system coming into contact with the adhesive should have an anti-stick coating to prevent catalytic reactions due to metal contact. The anti-stick coating also facilitates a considerably easier cleaning process.

The melting and application units should be equipped with a precise temperature control to prevent local overheating and unwanted secondary reactions. Heating the adhesive to a temperature above the recommended processing temperature will usually lead to a fast increase in viscosity of the melt due to a so-called thermal crosslinking reaction in the adhesive (the allophanate reaction), which is initiated without exposure to moisture, solely by heat.

Cleaning

Flush out PUR melt remnants from roller applicator units with **Jowat® Flushing Agent 930.34** (red). Clean applicator units (e.g. rubber or steel rollers) thoroughly with **Jowat® 930.20** or **930.23/24** (powder) (2 cleaning cycles). Crosslinked, solid material has to be dissolved with **Jowat® 930.60** or **930.65** (please test for suitability before use). For more information, please refer to the “PUR hot melt Manual” under the heading “Maintenance and Cleaning” (available upon request).

Jowatherm-Reaktant® - Flat lamination

Product overview

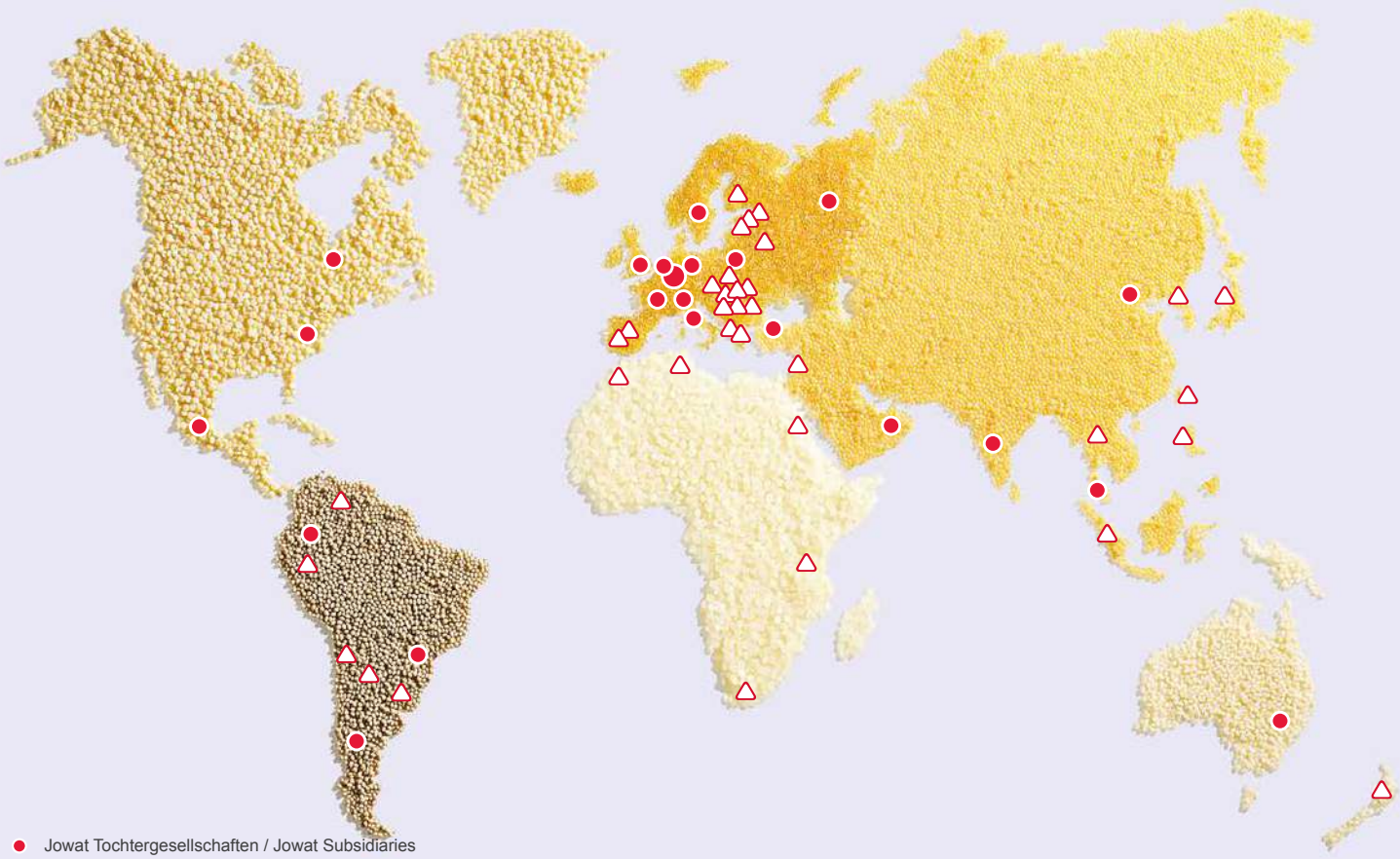
The following table provides an overview of our tried and proven PUR hot melt adhesives of the Jowatherm-Reaktant® product series for flat lamination. The product range includes several different adhesive types with special characteristics, adapted to the standard process requirements in flat lamination applications. The main differences between the individual products relate primarily to the demands on the specific conditions in manufacturing and the used substrate and laminating material. Please contact our Sales Representatives for a more detailed advisory service and adhesive selection.

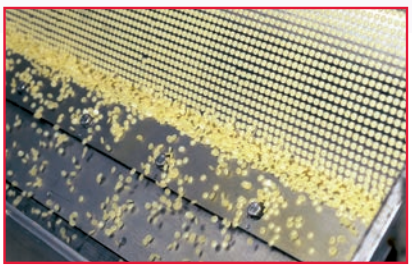
			LONG OPEN TIME	BASIC ALLROUNDER	BEST ADHESION	HIGH GLOSS	HIGH INITIAL STRENGTH	MR MONOMER-REDUCED
			Jowatherm-Reaktant® 609.20	Jowatherm-Reaktant® 609.30	Jowatherm-Reaktant® 609.36	Jowatherm-Reaktant® 609.40	Jowatherm-Reaktant® 609.50	Jowatherm-Reaktant® 609.94
Technical Data	Processing temperature	[°C]	110 - 130	110 - 130	110 - 130	110 - 130	120 - 140	110 - 130
	Viscosity at 120 °C	[mPas]	approx. 14,000	approx. 15,000	approx. 15,000	approx. 8,000	approx. 24,000	approx. 8,500
	Open time (film) at 120 °C	[min]	5 - 8	3 - 4	4 - 5	3 - 4	approx. 2	approx. 1
	Density [g/cm3]		approx. 1.1 (unfilled)	approx. 1.1 (unfilled)	approx. 1.1 (ungefüllt)	approx. 1.1 (unfilled)	approx. 1.1 (unfilled)	approx. 1.1 (unfilled)
Carrier substrate	Wood, wood-based materials (MDF, particleboard, plywood, ...)		●	●	●	●	●	●
	Plastic (PVC, ABS, ...)		●	●	●	●	●	●
	Metal (aluminium ano./ chrom., steel, ...)			○	●			○
	Foams (PU, PS, ...)		○	●	●	●	●	●
Laminating material	Resinated decor papers		○	●	●	●	●	●
	Thermoplastic foils (PP (treated), PVC, PET, PMMA, ...)		○	●	●	○	○	○
	High-gloss foil (PVC, ABS, PET ...)			○		●		
	Laminates (CPL, HPL, ...)		○	●	●	○	●	●
	Metallic foils (aluminium, steel, ...)			○	●		○	○
	Veneer (with fleece backing), raw veneer		○	○	○	○	○	○

The information given in this leaflet is based on practical experience and on results of tests in our laboratory, and does in no way constitute any guarantee of properties. No liability may be derived from these indications nor from the recommendations made by our technical advisory service. Customer trials are recommended. Please request an individual data sheet before processing and follow the instructions in it.

○ technically convenient ● technically preferred

Jowat | Ihr Partner in Sachen Kleben
Jowat | Your Partner in bonding





Jowat – Kleben erster Klasse
Jowat – first class bonding

Jowat SE
Ernst-Hilker-Straße 10-14
32758 Detmold
Telefon +49 (0)5231 749-0
info@jowat.de · www.jowat.de

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