



Jowatherm-Reaktant® Profile Wrapping

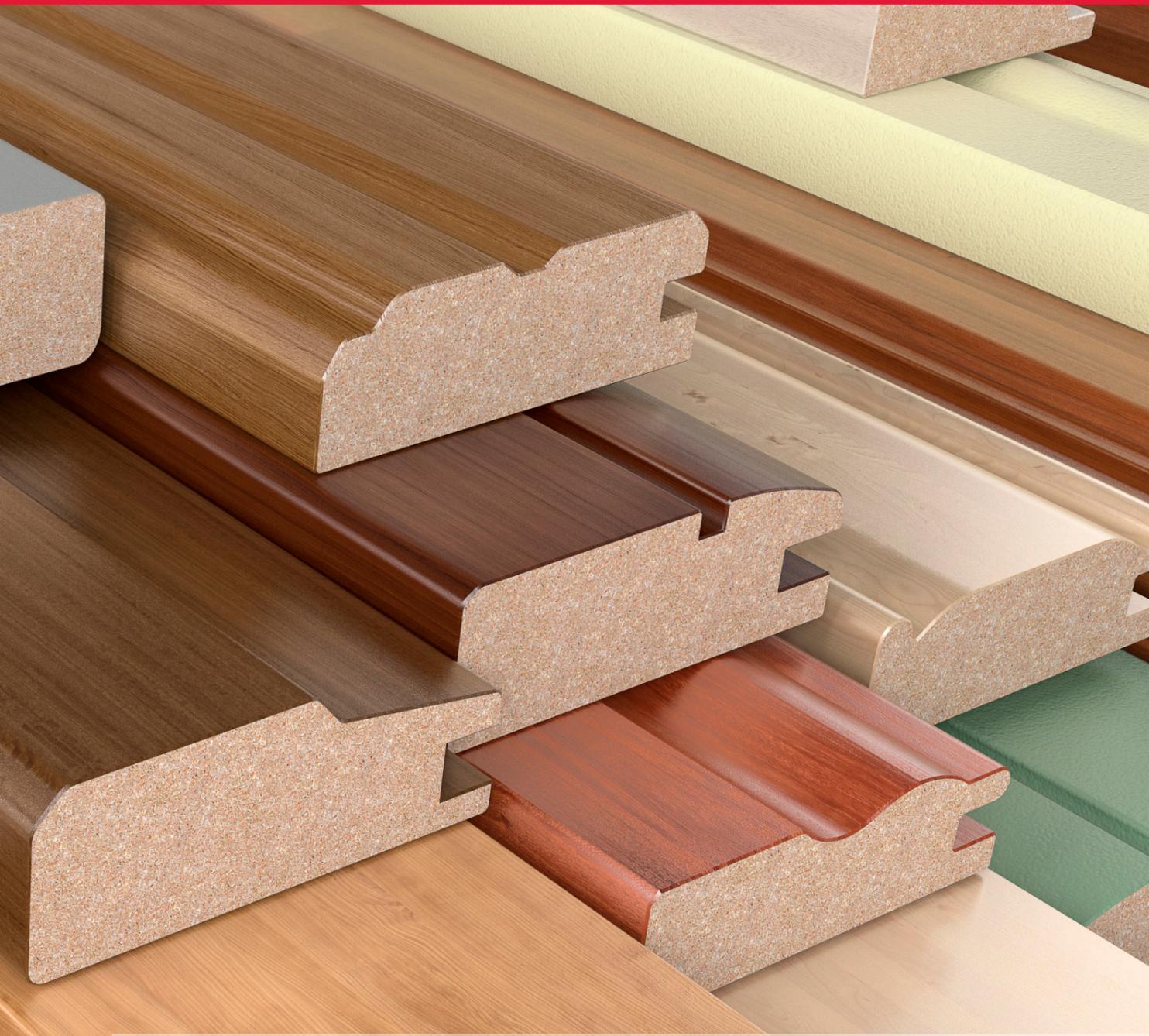


Polyurethane hot melt adhesives (PUR HM) for profile wrapping

Modern adhesive portfolio with solutions for all process requirements

Highest moisture and heat resistance

Suitable for wood, plastic and metal profiles



PUR hot melt adhesives for profile wrapping

Profile wrapping applications have been a growth market in the wood and furniture industry for many years with continuously increasing requirements for manufacturing processes as well as adhesives. Years ago, strips of solid wood or other materials were profiled mechanically and then lacquered. Since then, the technology has changed significantly. Today, a multitude of substrates, such as wood-based materials, plastic and metal is wrapped with a continuously increasing variety of foils. The finished profiles 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. While laminating processes in the 1980s were generally related to classical ceilings and door frames with real wood veneer, the current material combination has to meet continuously increasing requirements. Polyurethane hot melts have been established on the market for many years and are the product of choice for applications which require a superior bonding quality.

These adhesives are used for instance when the end product has to fulfil special demands with regard to moisture and heat resistance. An additional benefit provided by PUR hot melts is the extremely wide range of adhesion. The problem-solving adhesives for demanding bonding processes are now the standard product for metal profiles and for applications with foils that are difficult to bond. Modern raw materials from the chemical industry open up new opportunities for adhesive formulations to meet the continuously increasing processing speed and automation level in the manufacture of profiles. The completely revised PUR hot melt portfolio of Jowat for profile wrapping applications provides the optimal solution for every requirement of our customers.

INFO: PUR hot melt adhesives

One-component, reactive polyurethane hot melts (PUR HM) are characterised by a chemical crosslinking reaction with moisture after the physical setting process through cooling and solidification. During crosslinking small amounts of CO₂ gas are formed, most of which is released through the adhesive film. At room temperature, this minimal amount of CO₂ gas is generally not visible to the human eye. The chemical reaction is initiated by humidity and/or moisture in the substrates. Therefore, PUR hot melts have to be protected from humidity during production and storage to prevent premature reactions. After complete chemical crosslinking, PUR hot melts cannot be molten again and provide superior resistance to water, solvents and cleaners.



Technical Information

Applications

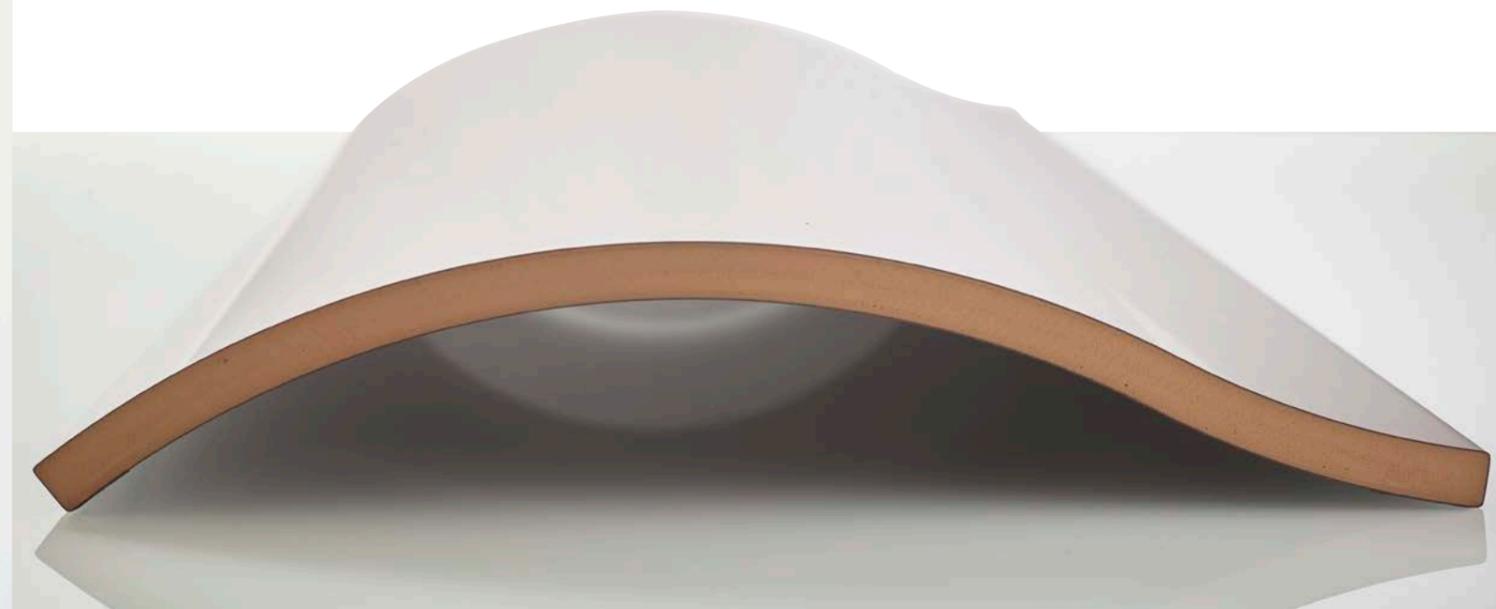
For wrapping profiles made of wood, plastic and metal with thermoplastic foils (e.g. PVC, PMMA, ABS), laminates (e.g. CPL) or resin-impregnated decor papers (e.g. finish foils).

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, i.e. solely by heat.

Cleaning

Flush out PUR melt remnants from melting and application units with flushing agent **Jowat® 930.74** (red). Crosslinked, solid material has to be dissolved with the cleaner **Jowat® 930.60** (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).



Product overview

The following table provides an overview of our tried and proven PUR hot melt adhesives of the Jowatherm-Reaktant® product series for profile wrapping. The product range includes several different adhesive types with

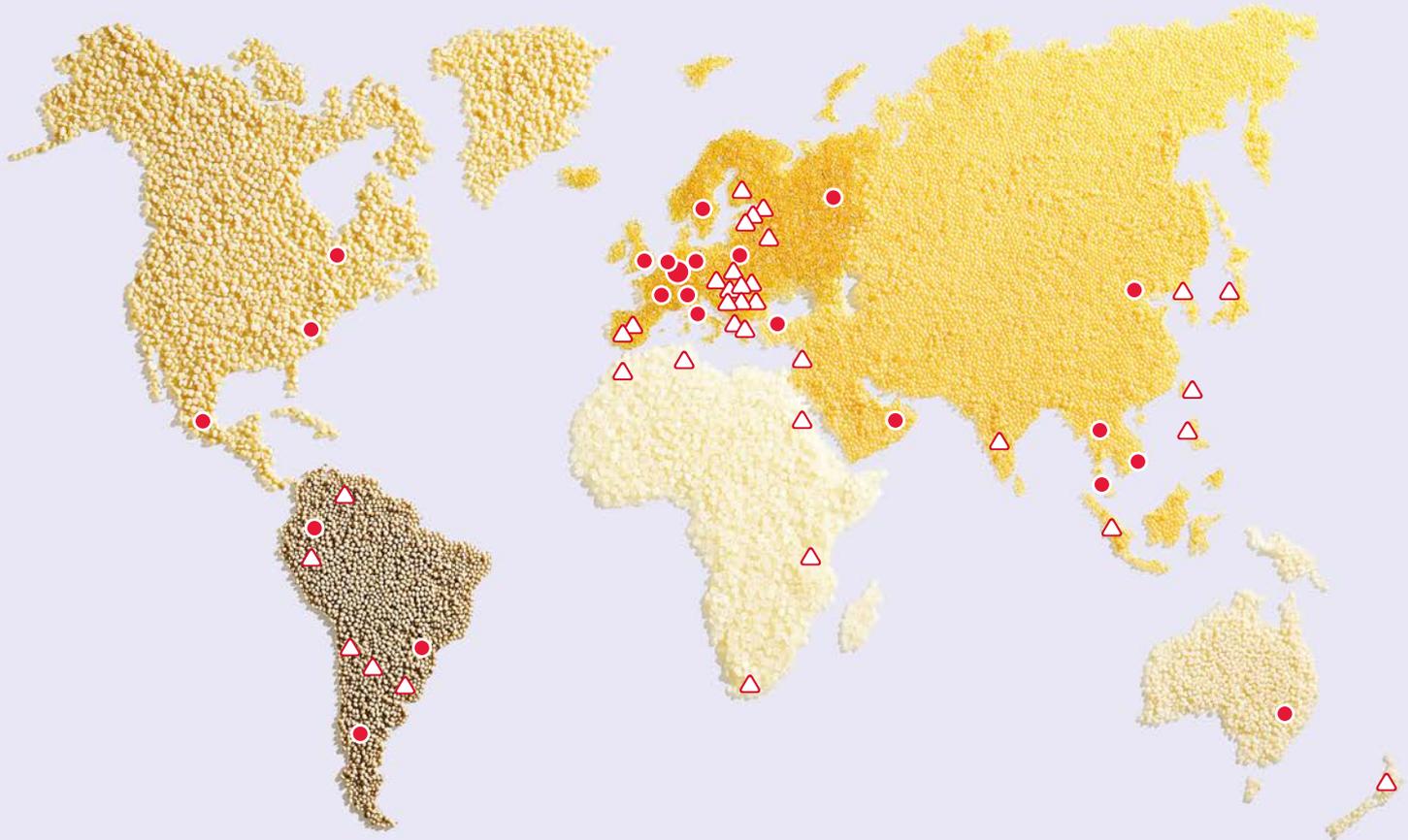
special characteristics, adapted to the standard process requirements in profile wrapping applications. The main differences between the individual products relate primarily to the demands on the specific conditions in manufacturing and the used substrate and laminating material. Please contact our Sales Representatives for a more detailed advisory service and adhesive selection.

		BASIC "ALL-ROUNDER"	BEST PRICE- PERFORMANCE	FAST PROCESSES	HIGH COHESION	BEST ADHESION
		Jowatherm-Reaktant® 605.20	Jowatherm-Reaktant® 605.65	Jowatherm-Reaktant® 605.80	Jowatherm-Reaktant® 608.00	Jowatherm-Reaktant® 605.10
Technical Data	Processing temperature [°C]	120 - 140	140	120 - 140	120 - 140	120 - 140
	Viscosity at 140 °C [mPas]	approx. 35.000	approx. 37.000	approx. 23.000	approx. 40.000	approx. 36.000
	Open time (film) at 140 °C [s]	approx. 15	approx. 18	approx. 6	approx. 10	approx. 25
	Density [g/cm³]	ca. 1,1 (unfilled)	approx. 1,1 (unfilled)	approx. 1,1 (unfilled)	approx. 1,1 (unfilled)	approx. 1,1 (unfilled)
	Feed speed [m/min]	10 - 60	10 - 60	25 - 80	10 - 60	10 - 40
	Application amount (depending on substrate properties) [g/m²]	approx. 40 - 80	approx. 40 - 80	approx. 40 - 80	approx. 50 - 100	approx. 30 - 60
Carrier substrates	Wood-based materials (MDF, particleboard, plywood, ...)	●	●	●	●	●
	Plastic (PVC, ABS, ...)	○	○	●	●	●
	Metal (aluminum ano./ chrom., steel, ...)			○	●	●
Laminating materials	Finish/Decor foils	●	●	●	●	●
	Thermoplastic foils (Alkorcell, PP, PVC, PET, PMMA, ...)	●	●	●	●	●
	Laminates (CPL, ...)	○	○	○	●	
	Aluminum foil			○	●	●
	Veneer (fleece-backed)	●	●	●	●	○
	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

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Jowat – first class bonding

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