

3D SURFACE BONDING



SURFACE BONDING WITH 3D TECHNOLOGY

Some furniture surfaces are three-dimensional (usually specially formed or milled MDF panels), either for construction or design-related reasons. They are surface laminated to achieve an appealing look, feel and function, usually in a 3D process using membrane or vacuum pressing. As a rule, low-viscosity, single or two-component PUR dispersions are used for laminating.

Narrow radii and sharp contours are a special challenge in 3D lamination. Achieving a good result requires both the right adhesive and the correct know-how for its application.

PUR dispersions are the products of choice here, as they can be used for gluing standard films as well as high-gloss decors. Even very thin films that are sensitive to high temperatures can be glued with the right dispersion. The PUR dispersion is applied to the carrier material either with a manual gun or automated spray nozzles, and the decor material is then pressed on with a vacuum or membrane press. The pressure and heat in the press reactivate the adhesive and allow the film to adapt to the contours of the carrier material.

PVAc dispersions (aka white glues) can be used for laminating real wood veneers, and are a cost-effective alternative to PUR dispersions for gluing all kinds of veneers. Before the materials are joined in a membrane press, the veneers are moistened to prevent any cracks or tears appearing during the pressing process. PUR dispersions are the best choice when a very high resistance to temperatures and moisture is required, e.g. as in for bathroom and kitchen furniture.

FIELDS OF APPLICATION

- fronts
- shelf tops of sideboards and display cabinets
- closet doors
- door panels

made of material combinations of:

- PVC films and MDF
- PP films and MDF
- ABS films and MDF
- real wood veneers and MDF

LIVING ROOMS



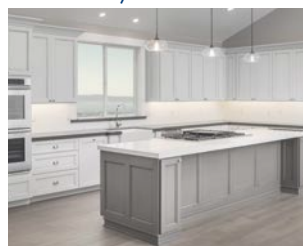
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BEDROOMS



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KITCHENS/BATHROOMS



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CONTRACT FURNITURE



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PRODUCT OVERVIEW



	Product	Color	Color after drying	Viscosity [mPa.s]	Hardener	Reactivation	Optim. nozzle diameter [mm]	Reference value for spray pressure* [bar]	Reactivation temp. [°C]	Heat resistance (depending on material) [°C]	Characteristics
1 C Latent Reactive PUR Dispersions	430.2	blue	bluish transparent	800	internal	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	to 120	very high heat resistance
	430.3	white	transparent	800	internal	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	to 120	
	430.4	white	white	800	internal	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	to 120	for dark MDF, thin foils and high glass foils, suitable for automatic application, especially smooth application
	430.6	blue	bluish transparent	2500	internal	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	to 120	
	430.7	white	transparent	2500	internal	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	to 120	
	430.8	white	white	2500	internal	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	to 120	dries white, very well suited for dark MDF and thin foils
	430.9	white	fluorescent	2500	internal	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	to 120	fluorescent version of 430.7 for improved application control with UV light, especially for automatic lines
431.7	white	transparent	2000	internal	up to 72 h	1.0 - 1.7	nozzle: 1.0 = 3.0 - 6.0 nozzle: 1.4 = 2.0 - 4.0	from 50	to 120	suitable for small nozzle diameters, nozzles do not clog, especially for automatic lines, very uniform surface, ideal for high glass foils	
1C / 2C PUR Dispersions	432.4	blue	bluish transparent	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 55	without hardener: 80 with hardener: 110	cost effective
	432.5	white	transparent	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 55	without hardener: 80 with hardener: 110	
	432.6	blue	bluish transparent	2200	5 % 807.0	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 55	without hardener: 80 with hardener: 110	especially smooth application, for dark MDF, thin foils and high glass foils, suitable for automatic application
	432.7	white	transparent	2200	5 % 807.0	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 55	without hardener: 80 with hardener: 110	
	435.7	white	transparent	2.500	internal	up to 72 h	1.6 - 2.0	nozzle: 1.6 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	to 120	for thin foils and high glass foils, smooth application
	436.2	blue	bluish transparent	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	without hardener: 90 with hardener: 120	suitable for very small nozzle diameters, especially fine spraying possible, suitable for high density MDF
	436.3	white	transparent	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	without hardener: 90 with hardener: 120	
	436.4	white	white	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	without hardener: 90 with hardener: 120	fluorescent version of KLEIBERIT 436.3 for improved application control with UV light, especially for automatic lines
	436.5	white	fluorescent	800	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.4 = 1.5 - 2.5 nozzle: 1.6 = 1.5 - 3.0	from 50	without hardener: 90 with hardener: 120	
	436.6	blue	bluish transparent	2200	5 % 807.0	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	without hardener: 90 with hardener: 120	for dark MDF, thin foils and high glass foils, suitable for automatic application, especially smooth application
	436.7	white	transparent	2200	5 % 807.0	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	without hardener: 90 with hardener: 120	
	436.9	white	transparent	2200	5 % 807.0	up to 72 h	1.7 - 2.0	nozzle: 1.7 = 2.0 - 4.0 nozzle: 2.0 = 2.5 - 4.5	from 50	without hardener: 90 with hardener: 120	fluorescent version of KLEIBERIT 436.7
438.7	white	transparent	2200	5 % 807.0	up to 72 h	1.2 - 1.7	nozzle: 1.2 = 3.0 nozzle: 1.7 = 4.0	from 50	without hardener: 80 with hardener: 110	no clogging of the nozzles, especially for automatic application systems, very homogeneous application pattern, long shelf life of 9 months	
439.3	white	opaque transparent	800	5 % 807.0	up to 72 h	1.0 - 1.7	nozzle: 1.0 = 2.5 - 3.5 nozzle: 1.4 = 1.5 - 2.5	from 55	without hardener: 80 with hardener: 120	suitable for small nozzle diameters, cost effective alternative for 3D furniture fronts and lamination for automotive interiors. The product has a high tack in a dry state. Therefore, do not stack adhesive coated panels without a separating layer.	

*Due to the large number of spray pistols, the ideal spray pressure for the respective application (depending on the diameter of spray nozzle in use) must be determined in own tests.