

## 3D SURFACE BONDING

LIVING ROOMS

BEDROOMS

KITCHENS /  
BATHROOMS

CONTRACT FURNITURE



## 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



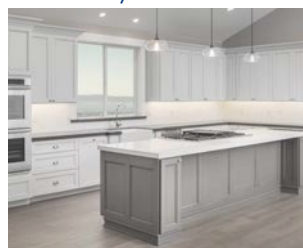
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## PRODUCT OVERVIEW



|                                     | Product | Color | Color after drying | Viscosity<br>[mPa.s] | Hardener  | Reactivation | Optim.<br>nozzle<br>diameter<br>[mm] | Reference value for<br>spray pressure*<br>[bar]    | Reactivation<br>temp.<br>[°C] | Heat resistance<br>(depending on<br>material)<br>[°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<br>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<br>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<br>nozzle: 1,6 = 1,5 - 3,0 | from 50                       | to 120  |   |
|                                     | 430.6   | blue  | bluish transparent | 2500                 | internal  | up to 72 h   | 1,7 - 2,0                            | nozzle: 1,7 = 2,0 - 4,0<br>nozzle: 2,0 = 2,5 - 4,5 | from 50                       | to 120  | for dark MDF, thin foils and high gloss foils, suitable for automatic application, especially smooth application  |
|                                     | 430.7   | white | transparent        | 2500                 | internal  | up to 72 h   | 1,7 - 2,0                            | nozzle: 1,7 = 2,0 - 4,0<br>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<br>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<br>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<br>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 gloss 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<br>nozzle: 1,6 = 1,5 - 3,0 | from 55                       | without hardener: 80<br>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<br>nozzle: 1,6 = 1,5 - 3,0 | from 55                       | without hardener: 80<br>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<br>nozzle: 2,0 = 2,5 - 4,5 | from 55                       | without hardener: 80<br>with hardener 110             | especially smooth application, for dark MDF, thin foils and high gloss 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<br>nozzle: 2,0 = 2,5 - 4,5 | from 55                       | without hardener: 80<br>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<br>nozzle: 2,0 = 2,5 - 4,5 | from 50                       | to 120  | for thin foils and high gloss 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<br>nozzle: 1,6 = 1,5 - 3,0 | from 50                       | without hardener: 90<br>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<br>nozzle: 1,6 = 1,5 - 3,0 | from 50                       | without hardener: 90<br>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<br>nozzle: 1,6 = 1,5 - 3,0 | from 50                       | without hardener: 90<br>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<br>nozzle: 1,6 = 1,5 - 3,0 | from 50                       | without hardener: 90<br>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<br>nozzle: 2,0 = 2,5 - 4,5 | from 50                       | without hardener: 90<br>with hardener 120             | for dark MDF, thin foils and high gloss 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<br>nozzle: 2,0 = 2,5 - 4,5 | from 50                       | without hardener: 90<br>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<br>nozzle: 2,0 = 2,5 - 4,5 | from 50                       | without hardener: 90<br>with hardener 120             | fluorescent version of KLEIBERIT 436.7  |
|                                     | 439.3   | white | opaque transparent | 800                  | 5 % 807.0 | up to 72 h   | 1,0 - 1,7                            | nozzle: 1,0 = 2,5 - 3,5<br>nozzle: 1,4 = 1,5 - 2,5 | from 55                       | without hardener: 80<br>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.