

## **FAST**team

Filter-Automotive-Sandwich-Textile



The **KLEIBERIT FAST**team specialises in bonds for the Filter, Automotive, Sandwich and Textile field and is available to apply its expertise to the realisation of your complex projects.

**KLEBCHEMIE**  
M. G. Becker GmbH & Co. KG  
Max-Becker-Str. 4  
76356 WEINGARTEN  
GERMANY  
Phone: +49 7244 62-0  
Fax: +49 7244 700-0  
Email: info@kleiberit.com

[www.kleiberit.com](http://www.kleiberit.com)  
Competence **PUR**

# **PanelPUR**A2

Innovative technologies to meet european standards!

## Panel bonding technologies!



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Competence **PUR**

# PanelPUR A2

Innovative technologies to meet European standards EN 14509 A2 ...

## Non combustible panels

Effective 1.10.2010, CE-labelling according to EN 14509 for self-supporting metal-sandwich insulation panels will be mandatory in the EU. Mineral-wool panel manufacturers will only have the opportunity to label their products according to EN 14509 Class A2 if the appropriate adhesive-systems are used.



For compliance with EN 14509 A2, KLEIBERIT has developed the new PanelPUR A2 series. It enables mineral-wool panel producers to choose the appropriate A2 adhesive system according their production-needs (e.g. wiper technology or spray application / continuous or discontinuous)

The PanelPUR A2 product range is comprised of filled and non-filled 1C and 2C PUR adhesive systems either with standard reactivity-profile or a special thermoactivated version for a long open time and short press time.

## Improved fire safety panels

PanelPUR A2 stands for “Production cost savings, without compromising quality”

Developed specifically for the mineral wool panel market, PanelPUR A2 – a 2C PUR adhesive – has a low gross calorific potential (PCS) and a very low viscosity. As a result, it offers better processing and application characteristics than alternatives currently available on the market.

The low gross calorific potential of PanelPUR A2 is particularly important for the manufacture of micro-profiled mineral wool panels, enabling the correct amount of adhesive to be applied without compromising the required A2 performance.



Tensile strength (material break mineral wool)

... a KLEIBERIT quality product made in Germany

## Advantages

In addition to its low gross calorific potential, PanelPUR A2 offers an increased processing window guaranteeing high quality and stable production.

The processing temperatures can be lowered due to a low initial viscosity resulting in substantial energy savings.

- Filled Systems with low viscosity at room-temperature
- Excellent and stable processing properties
- Increased application quantities possible due to low PCS values
- Excellent tensile-strength figures achievable..
- DUR2 and Wedge-test passed.

The controlled foaming characteristics offers sufficient flexibility whilst still providing a strong and tough final bond that allows lower coat weights to be used and still obtain very good panel performance. PanelPUR A2 can be applied using high and low pressure spray jet-stream techniques as well as with wiper and bead technology.

## Technical Information

PUR Adhesives for continuous lamination of mineral wool panels class A2 according to EN 13 501-1

Overview: PanelPUR A2 - Series

| Comp. A | Type                    | Application Technology                             | Mixing Ratio (A/B) by weight | PCS Calorific Value [MJ/kg] | Viscosity at 20°C (A/B) [mPas]   | Application Temperature (A/B) [°C] | Start Time (80 g mixture at 20°C) [sec] | Tack-free Time (80 g mixture at 20°C) [sec] | Press Time* [min] |
|---------|-------------------------|--|------------------------------|-----------------------------|----------------------------------|------------------------------------|---|---|-------------------|
| 508.9   | 1C PUR                  | spray or bead system                               | n.a. (10% water mist)        | 21,5                        | 10,000                           | 20-30                              | n. a.                                   | n. a.                                       | 6 at 45°C         |
| 570.2   | 2C PUR                  | spray system (e.g. PUMA / Robar)                   | 100:40                       | 16                          | 9,500/300                        | 20-30                              | 20                                      | 90  | 3-4 at 45°C       |
| 570.4   | 2C PUR                  | wiper system                                       | 100:58                       | 17                          | 3,400/300 (B1)<br>3,400/950 (B2) | 20-30                              | 26                                      | 72  | 3-4 at 45°C       |
| 570.5   | 2C PUR                  | bead system  | 100:36                       | 17                          | 6,000/300                        | 20-30                              | 18                                      | 120   | 3-4 at 45°C       |
| 570.9   | 2C PUR                  | spray system (e.g. PUMA / Robar)                   | 100:56                       | 17                          | 3,000/300                        | 20-30                              | 20                                      | 47  | 3-4 at 45°C       |
| 577.1   | 2C PUR                  | jet stream application head (high pressure system) | 100:62                       | 17,5                        | 2,400/300                        | 20-30                              | 18                                      | 50  | 3-4 at 45°C       |
| 577.9   | 2C PUR                  | spray system (e.g. PUMA / Robar)                   | 100:40                       | 18                          | 14,000/300                       | 20-30                              | 33                                      | 110   | 4 at 45°C         |
| 578.1   | 2C PUR unfilled         | spray or wiper system                              | 100:115                      | 27,2                        | 350/300                          | 20-30                              | 10                                      | 25  | 3-4 at 45°C       |
| 578.5   | 2C PUR unfilled         | jet stream application head (high pressure system) | 100:140                      | 26,8                        | 170/1,000                        | 20-30                              | 29                                      | 63  | 3-4 at 45°C       |
| 983.2   | 2C PUR thermo activated | spray system (e.g. PUMA / Robar)                   | 100:48                       | 17                          | 7,000/300                        | 20-30                              | 90                                      | 270   | 4 at 60°C         |

\* Presstime depends on machine setup and processing conditions



## Over 40 Years Experience in PUR Technology

KLEIBERIT is committed to continuous innovation and quality and has over 40 years experience specialising in the manufacture of polyurethane adhesives. KLEIBERIT continues to invest in equipment to enable the testing of new developments.



High pressure mixhead with permission from Isotherm/Swiss

For further information on the PanelPUR A2 series of products please contact our:

**FASTream** Filter/Automotive/Sandwich/Textile  
Tel. +49 7244 62-0 or info@kleiberit.com

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