

Sticks. When You Want It To.

Raw Materials for
One-Component Latent Reactive Polyurethane
Dispersion Adhesives



Dispercoll[®] U

License to Bond

Bayer MaterialScience patented one-component latent reactive technology available for license

Waits until you're ready to bond
Easy-to-use
Improves your productivity
Optimizes your cycle times
Simplified cleaning
Environmental friendly

Using the proprietary One-Component Latent Reactive Technology of Bayer MaterialScience:

Bayer MaterialScience AG owns the patent family to which various Patent Applications and Patents derived from EP-A 0 922 720 belong. These patents refer to an essentially aqueous dispersion which contains at least one solid surface-deactivated polyisocyanate and at least one polymer, reactive with isocyanate, e.g. like our TDI-Dimer-Masterbatch and a PU-dispersion or an acrylate dispersion.

As our valued Customer, you are invited to make use of this new technology.

Please contact us !

Heat activatable adhesives based on **aqueous Polyurethane dispersions** like **Dispercoll® U** have become established throughout the world in demanding industrial applications.

The main products used are **two-component adhesive systems** containing **dispersible Polyisocyanates** like Bayer MaterialScience's **Desmodur® D**.

The dispersible Polyisocyanate crosslinks the adhesive polymer after bonding and increases the heat resistance and final strength.

On the other hand, the 2K process requires an additional, error-prone mixing step by the user of the adhesive and gives the finished adhesive a limited pot-life.

One-component latent reactive Polyurethane dispersion-based adhesives – crosslinked with **deactivated Polyisocyanates** –

do not have these disadvantages for the end-user:

Get the 2K feeling ...

- High initial and maximum bond strength
- High final bond strength
- Good heat resistance
- Resistant to discoloration
- Long-term durability

... with a 1K system ...

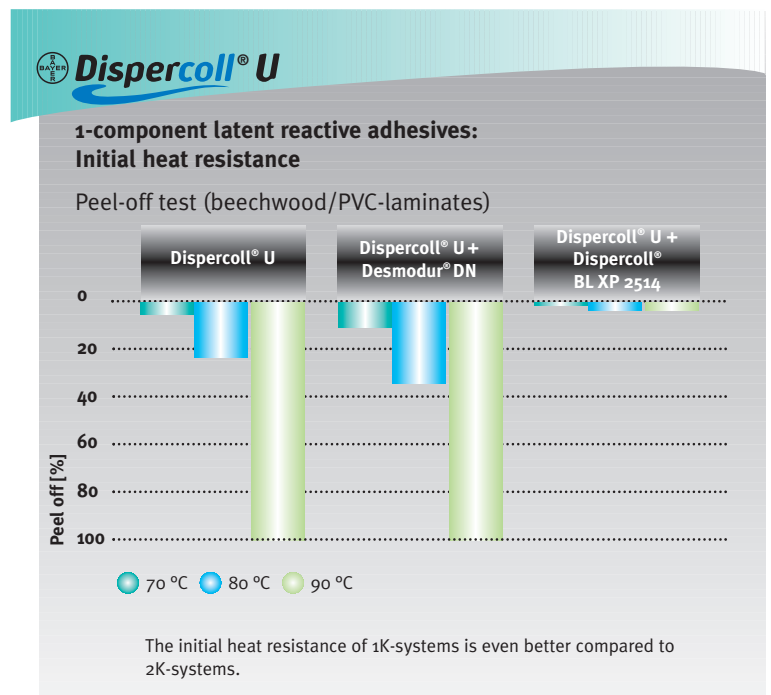
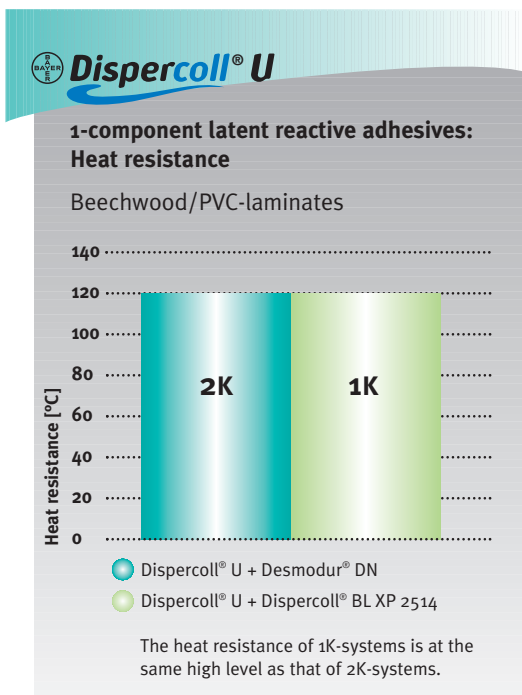
- Just one component to handle
(simplified logistics)
- No need for dosing before processing
(no mistakes, savings in cost/time)
- No worries about pot-life
(no limitations on weekends)
- Ready-to-use
(easier processing / less cleaning efforts per week)
- Excellent adhesion properties
(comparable to 2-component adhesives)

Bayer MaterialScience provides raw materials with perfect fit for both one- and two component Polyurethane dispersion adhesives.

Come and get it !

Solid Polyisocyanates

**Dispercoll® BL/Desmodur® Z –
for maximum initial and final bond strength in
one-component adhesive systems**



Dispercoll® BL XP 2514

formulation of standardized surface-deactivated TDI dimer particles:
properties:

- good storage stability
- no coagulation in 1K-PU dispersion systems
- no pH adjustment necessary


Desmodur® Z XP 2589

solid micronized IPDI trimer
properties:

- standardized particle size
- no discoloration
- storage stable precoatings or latent reactive adhesive films

Polyurethane dispersions

Dispercoll® U – different types for high performance bonds

	U 42	U 53	U 54	U 56	VP KA 8755	VP KA 8758	XP 2578
Polymer content [%]	50 ± 1	40 ± 1	50 ± 1	50 ± 1	45 ± 1	40 ± 1	40 ± 1
Viscosity	150 – 800	50 – 600	40 – 600	50 – 900	< 1,000	< 1,000	< 1,000
pH	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0	6.0 – 9.0

Bayer MaterialScience's Dispercoll® U grades mainly differ in their polymer softening characteristics. The standard grades

Dispercoll® U 53 and U 54 are suitable for most heat-activated application because of their ideal property profile.

Dispercoll® U 56 is ideal for low application temperatures, for example on heat-sensitive substrates. The extended range offers you the chance to find the ideal product for a special application or for particular activation conditions.

Dispercoll® U XP 2578 is a special grade for 1K latent reactive adhesive applications. It provides the ideal properties of the standard grades plus the option to formulate 1K adhesive systems especially in combination with our Dispercoll® BL XP 2514.

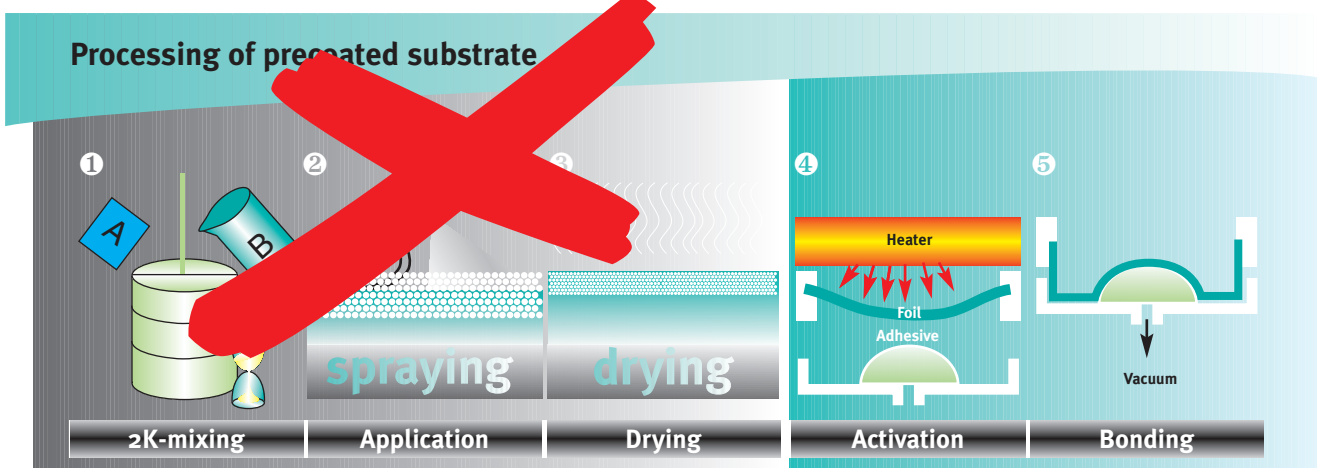


VisionWorks

It's your turn ...

Dispercoll® U and solid Polyisocyanates
(Dispercoll® BL XP 2514/Desmodur® Z XP 2589)
from Bayer MaterialScience open the possibility
to prepare

- precoated films and
- ready-to-use adhesive films
(reactive hotmelt films)



- Elimination of 2K mixing, application and drying
- Heat activation triggers the crosslinking reaction
- Excellent adhesion properties – comparable to 2-component adhesives
- Discrete adhesive films (reactive hot melt films): stability is not influenced by quality of the substrate

high-performance bonding ...

... you can't bond easier than this.

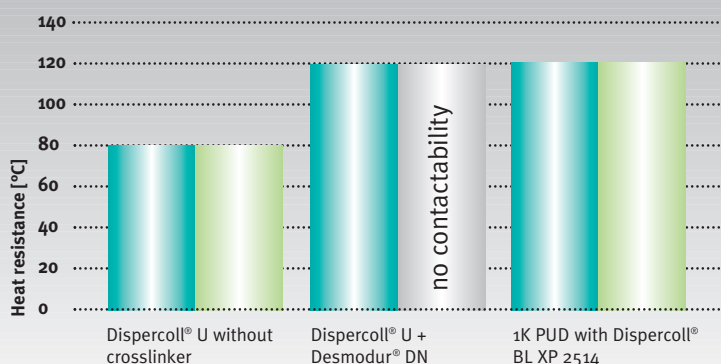
 **Dispercoll® U**

Precoating of a PVC film for furniture applications

PVC/beechwood –

Bondline temp.: 90 °C, Membrane press 4 bar/10 s

● fresh
● 3 month



Excellent heat resistance and storage stability of precoated PVC films.

Dispercoll® U, used in:

Furniture applications (3D-lamination process)

Automotive applications (interior trim parts ...)

Footware (sport shoes and street shoes)

Your ideas ...





Dispercoll® U

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