# Luphen® D 207 E

## Adhesive Raw Material

**Product description**

Luphen D 207 E is used in the manufacture of adhesives for laminating and heat-sealing.

The film that Luphen D 207 E yields can be activated by heat and in common with the PUR elastomer films, it has a limited hot-tack life.

**Chemical nature**

Aqueous dispersion of a polyester- polyurethane elastomer.

## Properties

**Physical form**

Liquid dispersion

**Technical data**
**(no supply specification)**

| | | |
|---|---|---|
| Solids content | DIN EN ISO 3251 | ~ 45 % |
| pH Value | DIN ISO 976 | ~ 7 – 9 |
| Viscosity | DIN EN ISO 3219 | 30 – 100 mPa·s |
| Glass transition temperature | | ~ –48 °C |
| Water absorption of film after 24 h | | ~ 8 % |
| Tensile strength of film | | ~ 40 N/mm² |
| Elongation at break | | ~ 1000 % |

## Application

In order to prevent coagulation, it is important to make sure that none of the components has a pH of less than 7 when thickeners are added or when Luphen D 207 E is mixed with other products.

Luphen D 207 E can only be mixed with anionic dispersions or with dispersions that contain a protective colloid.

Container, pipes and other equipment that come into contact with Luphen D 207 E must be made of corrosion-resistant materials such as 18/8 stainless steel or plastics to prevent coagulation.

Specially developed water-emulsifiable, polyfunctional isocyanates such as Basonat® F 200 WD can be added to adhesives formulated with Luphen D 207 E to improve the heat resistance of the bond and its resistance to hydrolysis.

The potlife of the adhesive depends on the reactivity of the isocyanate used, and this has to be determined in trials.

If Luphen D 207 E is employed in heat-sealing adhesives, an emulsifier such as Lumiten® I-SC should be added to the polymer dispersion at a rate of up to 1 % in order to promote the wetting of the substrate during coating.

We recommend adding a preservative to adhesives based on Luphen D 207 E to protect them from microbial attack.

The suitability of such additives must be verified and monitored in trials.

Manufacturers must carefully carry out their own trials when developing adhesives based on Luphen D 207 E, as there is a host of factors in production and processing that we cannot cover exhaustively in our trials which can influence compatibility with other components of the adhesives, their wetting of and adhesion to different substrates etc.

Particular attention is drawn to the fact that polyurethanes can be affected by hydrolysis and by exposure to heat, and comprehensive tests therefore need to be performed on adhesive formulations.

Polyurethanes are fast film forming polymer dispersions.

Therefore, the storing conditions should be respected (please check the specification data sheet).

However, a film formation cannot be avoided entirely.

If separated from the container wall, PUD films look very similar to plastic foils and tend to block the drain of IBCs.

We recommend to check the material from the top by opening the IBC and to remove the foil, if any, before emptying it.

There is no negative impact on the product quality noticeable.

**Safety**

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

**Note**

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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