

KLEIBERIT FlexPack

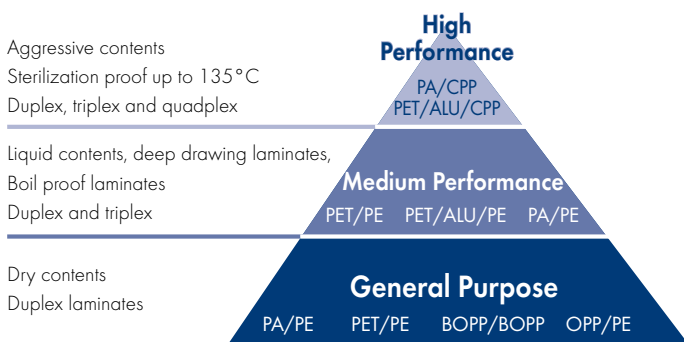
Adhesives for the Production of Flexible Packaging



High-quality and solvent-free adhesive systems for paper, film and foil lamination



Flexible packaging consists of a composite of several films. Depending on the intended use of the subsequent packaging, the structure and material composition of the individual films differs. The individual films are bonded together using a laminating process. Depending on the number of individual film layers, this is referred to as duplex, triplex or quadplex films, for example.



For the production of flexible packaging, KLEIBERIT offers a range of high-quality and solvent-free adhesive systems for paper, film and foil lamination. These adhesive systems comply with the required and recognized guidelines and regulations:

- FDA 21 CFR §175.105
- EU Regulation No. 10/2011
- BfR Recommendation Chapter XXVIII

KLEIBERIT 472.0

Water based adhesive for high gloss lamination. KLEIBERIT 472.0 for laminating primed foils (OPP, PET and acetate films) to printed and unprinted paper and cardboard.

- Very good application characteristics even at very fast line speeds
- Non-foaming
- Short setting time
- Very good gloss level and very good embossing
- Solvent and plasticizer free
- Applied Quantity: Depending on the type of foil 5-10 g/m² (dried)

KLEIBERIT 641.0

1C moisture curing and solvent-free PUR adhesive for high gloss lamination. KLEIBERIT 641.0 is suitable for high gloss lamination consisting of paper with foil/film, e.g. book covers, magazine covers, etc. The adhesive is a moisture curing system and should therefore be processed without being exposed to moisture if possible. A standard roller system is used for processing. The temperature and rollers should be adjusted to the processing parameters and are usually in an area of 60-100°C.

- Suitable for paper laminates such as paper/foil, paper/film, carton/film
- Ideal wetting, also on surfaces which are entirely printed
- Coat weight: 2-5 g/m²
- Good stability time in the machine
- Minimal adhesive waste
- Fast subsequent processing
- High transparency

KLEIBERIT 642.0 AND KLEIBERIT 643.0 HARDENER **••▲••** 2C, solvent-free PUR adhesive for foil lamination – quickly PAA free.

KLEIBERIT 642.0 with KLEIBERIT 643.0 hardener is excellent for foil lamination for the production of flexible packaging and is free from PAA after 3-5 days (depending on film, coat weight, processing parameters). The ideally adjusted system allows for low processing temperatures between 30 - 50°C as well as long machine standstills. It features excellent wetting properties, even at high line speeds.

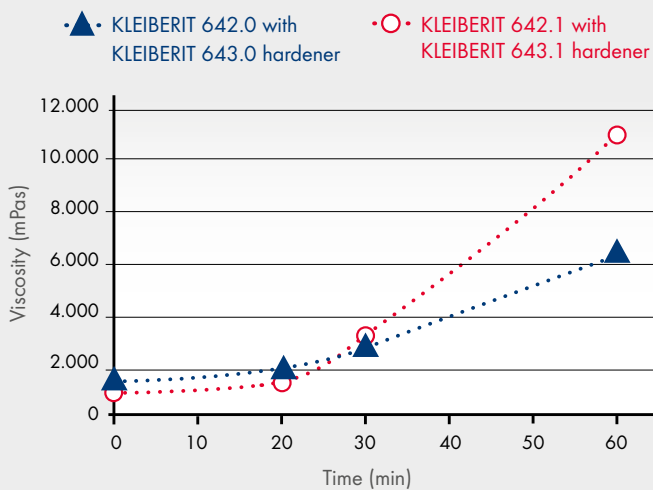
- Suitable for lamination at high line speeds up to 450 m/min
- Sealable after 48 hours
- High transparency

KLEIBERIT 642.1 AND KLEIBERIT 643.1 HARDENER **••○••** 2C, solvent-free PUR adhesive for foil lamination.

KLEIBERIT 642.1 with KLEIBERIT 643.1 hardener is suitable for universal, error-free production of laminated foils in areas ranging from general purpose to high performance. This results in a variety of applications as well as quick subsequent processing of the foils.

- Low processing temperature between 30-50°C
- Suitable for lamination at high line speeds
- Sealable after 36 hours
- High transparency

Viscosity Curve at 45°C (Brookfield HB-DV III(Sp. 27; 10 rpm)



ADHESIVES FOR FLEXIBLE PACKAGING

Product	Type	Mixing Ratio	Viscosity [mPa·s]			Processing Temp. [°C]	Coat Weight [g/m²]	Application				Properties
			100°C	80°C	45°C			film/paper	film/film	film/met. film	film/foil	
472.0	dispersion	-	18 s (DIN 53211, nozzle 4 mm at 20 °C)			18-22	5-10	■				good clarity on clear films
641.0	1C PUR	-	1,000	1,800	-	60-100	2-5	■				good stability in the machine
642.0/ hardener 643.0	2C PUR	100:40	-	-	1,800	30-50	1.1-2.5		■	■	■	PAA-free after 3-5 days*
642.1/ hardener 643.1	2C PUR	100:40	-	-	1,500	30-50	1.1-2.5		■	■	■	fast setting*

* depending on, among other things: film, coat weight and processing properties

KLEIBERIT ADHESIVES - THE SPECIALIST AMONGST ADHESIVE MANUFACTURERS

675 EMPLOYEES
60.000 T ADHESIVE PER YEAR

DIN ISO 14001
DIN ISO 9001
DIN ISO 50001



KLEIBERIT adhesives are an now integral part of the world we live in. Today KLEIBERIT SE & Co. KG is based in Weingarten Baden (Southern Germany) and also has one of the most modern and innovative research and production centres worldwide. Innovative adhesive systems for a wide field of applications are being developed in cooperation with, and produced for international customers. The product range is designed specifically for customer requirements and worldwide availability is ensured with an intelligent logistics concept.

INNOVATIONS - NEW IDEAS DEVELOP TOGETHER WITH CUSTOMERS.

Adhesive bonding is the bonding technology of the future. KLEIBERIT'S strategy is to continue to provide new innovations for a wide field of applications. One investment for the future is the shown by the opening of the TECHNICAL CENTER in 2009. Customer can regularly be found here working closely with KLEIBERIT engineers and technical personnel to develop specific product solutions.

COMPETENCE PUR - RESEARCH AND DEVELOPMENT SECURE THE FUTURE.

The KLEIBERIT trademark stands for innovative research and development, the most modern production, highest product quality as well as service oriented, customer focused and competent consultation. And this for 75 years.

In the last 25 years, KLEIBERIT has become a global trendsetter for PUR adhesive systems and has significantly influenced the market with its innovative product ideas.

CUSTOMER SATISFACTION - EVERY CUSTOMER IS NUMBER ONE WITH US.

On the road in many markets and all regions of the world, we speak almost every national language and are directly on site via a comprehensive service and consulting network. By working closely with machine and material manufacturers, we offer practical and innovative adhesive systems which meet a wide variety of international standards and norms.

SOCIAL RESPONSIBILITY - WE LIVE THE PRINCIPLE OF SUSTAINABILITY IN PROCESSES AND PROCEDURES ACCORDING TO CERTIFIED QUALITY AND ENVIRONMENTAL MANAGEMENT.

Responsibility towards the environment and the people in research, development, production and logistics is one of the main goals at KLEIBERIT. Our demand to combine high product quality with environmental and health and safety of the workforce accompanies our innovation process from the beginning. We also want to further develop this global responsibility in the future with sustainable processes and goals.

KLEIBERIT® ADHESIVES WORLDWIDE:

KLEIBERIT Chimie S.a.r.l.
Reichstett, France

KLEIBERIT Adhesives UK
Coalville, Leicestershire, England

KLEIBERIT Adhesives USA Inc.
Waxhaw, North Carolina, USA

KLEIBERIT Adhesives of Canada Inc.
Toronto, Ontario, Canada

KLEIBERIT Adhesives Asia Pte. Ltd.
Singapore, Singapore

KLEIBERIT Adhesives Australia
Sydney, Australia

KLEIBERIT Adhesives Japan
Osaka, Japan

KLEIBERIT Adhesives Beijing Co., Ltd.
Beijing, China

KLEIBERIT Russia
Moscow, Russia

KLEIBERIT Adhesives India Private Ltd.
Bangalore, India

KLEIBERIT-UKRAINE LLC.
Kiev, Ukraine

KLEIBERIT Kimya San. ve Tic. A.Ş.
Istanbul, Türkiye

KLEIBERIT do Brasil Comércio de Adesivos e Vernizes Ltda.
Curitiba, Brasil

KLEIBERIT Bel
Minsk, Belarus

KLEIBERIT Adhesives México S.A. de C.V.
Mexico City, Mexico