

Flexbond 40A/Flexbond 45C

Type of polymer: Two-component polyurethane solvent based adhesive system.

Range of use: The adhesive system is suitable to produce multilayers flexible laminates with aluminium and printed or non-printed films. The system exhibits excellent wettability on printed layers and metallized film and also very good final bond values.

Polymer Specifications:		Catalyst Specifications:	
FLEXBOND 40A	NCO terminated	FLEXBOND 45C	OH terminated
Colour (Gardner 1953) NV (%) Viscosity (mPa*s 25°C) Density (g/ml 20°C) Solvent	2 MAX 60±1 1500 ± 500 1,07 +/- 0,05 Ethyl Acetate	Colour (Gardner 1953) NV (%) Viscosity (mPa*s 25°C) Density (g/ml 20°C) Solvent	3 MAX 75±2 500± 100 1,07 g/ml +/- 0,05 Ethyl Acetate

Legislation:

As a result of the continuous evolution of European and local regulations it is advisable to contact our customer service for additional information. We believe, however, it is essential that the user of the adhesive system, and the final packaging, producer, make appropriate analysis to determine the suitability of this product for the particular application.

Product properties:

FB 40A-FB 45C warrants good initial and final adhesions. FB 40A-FB 45C is indicated to the production of sterilizable and boilable laminates and for all constructions that require a high chemical and thermal resistance. The good wettability suggest to use this adhesive to laminate metallized films. Thanks to its high initial green tack this adhesive is indicated to produce triplex laminates. An interactions between FB 40A-FB 45C and other constituents of the laminates (inks, films, additives) may occur. For this reason the suitability of FB 40A-FB 45C should be checked by practical test before starting a regular production.

Note: our technical service is always at the disposal of any further Information.

Laminates exhibit:

- Very good bond strength
- Very good chemical and thermal resistance
- Very good ink wetting, providing excellent appearance and finish

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Mix Ratio: 100 parts of FB 40A
10 parts of FB 45C

Application system; the adhesive can be applied with all dry laminating units for solvent based adhesive (smooth or gravure rolls).

Application weight; The adhesive weight may range from 2 - 4 g/m² dry. Transparent laminates exposed to heater deep drawing may require higher weights. For printed films the application weight has to be adjusted accordingly and it should be approx. 1 gm higher than for unprinted films. Highest possible laminating temperatures together with high line pressure of the calander improve bond strength and optical appearance of the laminates.

Note: Our technical assistance service is at your disposal for further information.

System preparation; FB 40A has to be diluted down to the solids concentration requested by mixing it with the corresponding solvent. The hardener FB 45C has to be added consequently to the diluted FB 40A solution.

The optimal mix ratio is the following :

25 Kg of FB 40A + 20 Kg of solvent + 2,5 Kg of FB 45C

Pot Life: The ready-to-use adhesive FB 40A-FB 45C in closed containers has a working time of about 12 hours.

Dilution Table:

%Dry	25	30	35	40	45
Flexbond 40A	100	100	100	100	100
Flexbond 45C	10	10	10	10	10
Solvent	160	115	80	60	40
Viscosity 25°C. Ford Cup n° 4	11 sec	12 sec	14 sec	16 sec	18 sec

Curing:

After a standstill of the machine for more than 30 min, it could be necessary to clean application unit with some solvents. The same cleaning procedure has to be followed as soon as production stops. Suitable cleaning agents, which are MEK and/or ethyl acetate, may also be used provided that safety guidelines are being observed.

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Cautionary information:

Curing begins during lamination and continues slowly at room temperature. Complete curing will be achieved after about 7 days of storage at room temperature (depending upon the laminate structure, environmental and coupling conditions).

Storage of trials at low temperature (<20°C) and/or high humidity is not guaranteed.

Storage:

In order to minimize emissions of isocyanic volatile compounds, the coating unit must be equipped with vacuum systems. Make sure that the value of TLV (maximum concentration in air) in the work does not exceed the limits set.

Waste classification:

RTC guarantees 6 months for the NCO terminated product and of 12 months for OH terminated product, taking care to keep them in the original containers, tightly closed and in a dry and ventilated place.

Additional information:

In accordance with the local legislation the adhesive system FB 40A-FB 45C cross-linked and cured, can be classified as special waste.

In case of dilution with Ethyl acetate don't change the polymer classification

Films, additives, contained in such films (antistatic, slip agents etc.) printing inks, preliminary treatment proceedings, operative conditions of rolling and manufacture products are all factors which may influence, even after some time, the properties of adhesion and endurance of the rolled products.

In order to achieve the best results in relation to the final properties of the products, the specific features of each component used in the production of the package must be considered.

Adhesive technical assistance (ATA) service of RTC is available for providing you with all the assistance and information you might need for the correct use of our adhesive system.

RTC warrants that the properties of the product FLEXBOND is exact, in compliance with all statutory requirements and exclusively derive from its own knowledge and experience. RTC also warrants that, when used in accordance with the instructions provided and standard conditions of use, the product FLEXBOND is free from defects. There are no other warranties, expressed or implied. Considering the existence of different materials and the fact that the conditions of application cannot be under our control, the user must verify the suitability of the product for the intended use, through adequate tests, so the user undertakes all responsibilities of the final packaging. The user of the product FLEXBOND accepts all risks and liability related to inappropriate use of the product. Stating that FLEXBOND are not suitable for direct food contact, the producer of the final article has the duty to prove the absence of migration from indirect food contact.