



FORZAL ASL-20 A and ASL-21 B is a two-component solventless polyurethane-based adhesive, particularly designed for the laminating of all sorts of plastic films: OPP, CPP, HDPE, LDPE, PET, PA, cellophane (DX, XS and DX) and aluminium. And the films like as: EVA, EVOH, PVOH, etc.

Technical Characteristics

PRODUCT	FORZAL ASL 20A	FORZAL ASL 21B
Solids (%)	100	100
Viscosity (at 25°C Brookfield, cPs)	1800 ± 200	900 ± 100
Functional character	NCO	OH
Density	1,15 g/cm ³	0,96 g/cm ³
Colour	slightly yellowish	

Preparation of the blend

Rate: in weight	FORZAL ASL 20A	100
	FORZAL ASL 21B	80
in volume	FORZAL ASL 20A	100
	FORZAL ASL 21B	96

Pot life

The pot life of the blend ranges between 30 and 45 minutes at the usual application temperature.

Application

Application temperature

The application temperature of the adhesive is 30-40°C.

Amount of adhesive

Taking into account the aim of the work that must be done and the elements involved in such an operation, the most advisable amount is comprised within 1 and 2 g/m².

Processing and curing

Calendering

The best calendering temperature is 40°C, but it is possible to work at room temperature as well.

Curing

Thanks to a good adhesion and a quick curing, the item produced can be handled after 24 hours from its lamination. At the end of a week the item is completely cured.

Cleaning

Any part of the machine having been exposed to direct contact with the product ought to be cleaned with suitable solvents immediately after the operation. It is advisable to carry out a preliminary cleaning of the application zone by means of a liquid cleaner.

Food Report

The **Forzal** adhesives range complies with the rules and meets the requirements of FDA, part 175, paragraph B, section 175.105 about materials that are to be in contact with food.

Properties of the adhesive once cured

Once cured and completely dried, the adhesive film is transparent, odourless, elastic and resistant to ageing.

Useful life and storage

Since the useful life varies a lot due to reasons beyond the manufacture and the packaging of the product (storage conditions, carriage, etc), we guarantee the perfect condition of the product up to six months from its manufacture. Should the product be used after that date, some preliminary tests must be carried out. The product has to be kept tightly closed in its original container and stored at a temperature between 5 and 20°C.

Remarks

FORZAL ASL-20 A and ASL-21 B has a low free-monomer content and has been specially designed to minimize the problems that may arise from the formation of polyureas due to the chemical interaction with the additives used in the manufacture of PE. Therefore, it is a very suitable adhesive to get round the traditional difficulties generally created by migration.

Owing to the fact that **Forzal** adhesives contain polyisocyanates, all direct contact with the skin must be avoided.

Owing to the variety of working conditions, to the materials to be used and to the different nature of the products to be packed, our above indications should be considered for a guidance only. Each user should apply the product taking into account its means and experience.