

# SF9310A/SF9310B Solvent Free Polyurethane Adhesive

(High-Performance)

## Description

SF9310A/SF9310B is a high strength 2-component solvent-free aromatic polyurethane adhesive that can be fully cured to form an elastic film with high bonding strength and excellent heat-sealing strength with low friction coefficient. It can withstand 121°C/40 min retorting in structure of film/film.

This very high viscosity adhesive is specially designed for material of helium balloon and cold forming cheese bar or container. And it is not only offering expected performance in PET/AL, PET/PET, PET/VMPET, but also available in following high barrier sheets solventless lamination:

- ▶ PP.EVOH.PP with high oxygen, gas, aroma and water vapor barrier
- ▶ PET.PS.PE (EVOH.PA) and EVOH.PS.PE for cold forming cheese bar packaging
- ▶ PS.EVOH.PS for processed cheese, fruit desserts, fruit juices, UHT milk
- ▶ PS.EVOH.PE for Modified Atmosphere Packaging such as pasta, salads, sauces, pate
- ▶ PS.EVOH.PE/PP for long shelf life products such as drinks, fruit juices, tomato paste
- ▶ PE.PP.EVOH.PP for packaging of pasteurized fresh food

## Technical Properties

These properties are typical but do not constitute specifications.

Item	SF9310A	SF9310B
Type	Hardener	Main agent
Ingredient	NCO	OH
Appearance	Yellowish transparent liquid	Yellowish transparent liquid
Density (g/cm <sup>3</sup> )	1.17	1.01
Solid Content(%)	100%	100%
Viscosity (BKF25°C)	7500±2000cps	300±200cps

## Typical Features:

- Initial Viscosity is high and being available with high machine speed
- Good resistance in cold forming processing of high barrier films
- Good resistance in 121°C/40min for film/RCP pack
- Primary aromatic amines dissipate quickly
- High peeling strength in all applications of film/film, film/AL and film/met-film
- Very low friction coefficient index and good opening property
- Good resistance in high temperature of heat sealing
- Short curing time

## Recommended Operating Conditions

- ◆ The adhesive should be used up in laminator within 40 minutes after 2-components mixed.
- ◆ SF9310A:SF9310B recommended mix ratio is 100:50 and volume ratio is 100:57.9. The mix ratio can be from 100:40 to 100:60. Please choose the suitable mix ratio according to operation environment.
- ◆ It is recommended to use at 45°C to 50°C. According to different operation requirements, the recommended usage amount is 1.5-2.2g/m<sup>2</sup>, please find following different recommended usage amounts in laminations of different films structures.

Type	Films Laminating Structure	Usage Amount	Mix ratio
Two layers laminating	Plain: BOPP/ CPP, BOPP/ PE, PET/ PE, NY/ PE, PET/ CPP	1.5-1.7g/ m <sup>2</sup>	100: 50
	Printed: BOPP/ PE, BOPP/ CPP, PET/ PE, PET/ CPP, PA/ PE, PET/ CPP	1.7-2.0 g/ m <sup>2</sup>	
Multi-layer laminating	Printed PET/ VMPET/ PE, Printed PET/ VMCPP/ PE	1.7-2.0 g/ m <sup>2</sup>	100:50
High Barrier films	PET/ AL/ PE	1.7-2.0g/ m <sup>2</sup>	100:50-45
	Printed PP/ EVOH, Printed PET/ PP, Printed PS/ EVOH	1.7-2.0 g/ m <sup>2</sup>	100:50
	EVOH/ PE, EVOH/ PP, EVOH/ PS, PS/ PE	2.0-2.4 g/ m <sup>2</sup>	100:50

Note: The above is for reference only, please adjust according to the actual situation (film thickness, ink area, temperature and humidity of the workshop, equipment status).

- ◆ **Viscosity changing with temperature in mixing unit BEFORE being mixed (mPa.s)**

Code	20°C	25°C	30°C	35°C	40°C	45°C	50°C	60°C
SF9360A	10300	6800	4600	3200	2250	1550	1100	600
SF9360B	320	200	150	110	85	65	50	35

- ◆ Laminating Temperature : please find following different recommended operating temperatures in different processing sections.

Item	Temperature °C	Remark
A Component	50-60 °C	When the temperature is low in winter, the temperature can be appropriately increased
B Component	30-35 °C	
Feeding Tube	40 °C	Please make adjustments according to the actual situation. For example, when high frictional coefficient films are required or PE film is required to be relatively thin in second laminating, the laminating temperature can be properly reduced, and the cooling roll can be opened if possible. In winter conditions, the cooling roller can be changed to a heating roller, and then the laminated aluminumized films or thick PE films can have good leveling properties.
Transfer Roller	45 °C	
Coating Roller	45 °C	
Laminating	45 °C	
Curing Chamber	40~45 °C	
Curing time	> 24 hours	The special structures have to be curing for longer time, such as boiling grade, retorting grade, etc. The actual requirements shall prevail.

**Note:** When the temperature is low in winter, the adhesive should be put into the curing room in advance for 4~8 hours. To ensure a suitable operating environment, please pay attention to the

environmental temperature and humidity in the summer, the moisture absorption of the film, and solvent residual of the printed film, etc. Otherwise, it is easy to lead the adhesive sticky and other problems, the operating humidity should not exceed 80%. When the humidity is low in winter, the mix ratio should be properly adjusted.

### Cleaning

After production, the surface of the device is cleaned with a suitable solvent to prevent it from being hard to clean after curing.

### Package

Packed in steel drum normally. A-component is 20kg/drum. B-component is 10kg/drum.

### Safety & Storage

This product should be stored in the room without direct sunlight at temperature 15-25 °C, shelf life would be 6 months in unopened drums, it should be used as soon as possible after drum opened.

### Attentions

- When laminating different types of ink or transparent ink film, it is necessary to confirm whether it is suitable
- When laminating PET printed film, confirm whether the appearance meets the requirements or not
- If the contents of the package are corrosive, please confirm and start production
- In actual production, if other types of Ochem solvent-free adhesive are replaced, the cylinder, pipelines and rollers may not be cleaned. If solvent free adhesives other than Ochem adhesives are replaced, the user must perform thorough cleaning of the feeding system.
- Please stop using adhesive and then contact us when you find that the adhesive has become turbid or there is agglomeration.

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