

## SF9180A/SF9180B Solvent Free Polyurethane Adhesive

### Description

SF9180A/SF9180B is a two-component solvent-free aromatic polyurethane adhesive that can be fully cured to form an elastic film with good laminating strength and heat-sealing strength. It demands shorter curing time than other normal adhesives. SF9180A/SF9180B is low-viscosity adhesive specially designed for purpose of excellent optical property, high speed machine running, short curing time before slitting (5+ hours under 45°C), lower coating weight, easy cleaning on machine, Widely used in laminating of various treated film like BOPP、CPP、LDPE、PET、PA、Aluminum foil and metalized films etc.

### Declaration

OCHEM SF9180A/SF9180B 2-component solvent-free polyurethane adhesive are in compliance with the positive lists of the following, internationally accepted guidelines for the production of articles intended to come into indirect contact with food stuff.

- EU RoHS directive (EU) 2015/863 amending Annex II to directive 2011/65/EU
- CFR, title 21, § 175.105 of the FDA, Washington D.C., respectively
- Regulation (EC) No 1907/2006 concerning the REACH

### Technical Properties

Item	SF9180A	SF9180B
Type	Hardener	Main agent
Ingredient	NCO	OH
Appearance	Yellowish transparent liquid	Yellowish transparent liquid
Density (g/cm <sup>3</sup> )	1.161	0.998
Solid Content(%)	100%	100%
Viscosity (BKF25°C)	2500±500cps	450±200cps

### Typical Features:

- Widely used in laminating of various treated film like BOPP、CPP、LDPE、PET、PA、Aluminum foil and Aluminized film etc.
- SF9180A/SF9180B is low initial viscosity solvent free adhesives with advantages of fast curing (5 hours under 45 °C ) before silitting, excellent leveling, good wetting, long dynamic pot life online( 45minutes), good optical property, lower coating weight and easy for cleaning.
- It is **not** recommended for being used in laminating PET/VMPET and PET/VMCPP

- ◆ Viscosity changing with temperature in mixing unit BEFORE lamination (mPa.s)

Model	25°C	30°C	35°C	40°C	45°C
SF9180A	2100	1400	900	700	500
SF9180B	460	330	240	180	130

- ◆ The adhesive should be used up in laminator within 40 minutes after 2-components mixed
- ◆ SF9180A/SF9180B can be used for most films. The film should be corona treated prior to laminating for better adhesion
- ◆ SF9180A:SF9180B recommended mix ratio is 100:60 and volume ratio is 100:69.8. The mix proportion of SF9180A/SF9180B can be from 100:55 to 100:70.
- ◆ It is recommended to use at 30°C to 40°C or room temperature (25°C). According to different operation requirements, the recommended usage amount is 1.0-2.0g/m<sup>2</sup>, please find following different recommended usage amounts in laminations of different films structures.

Films Laminating Structure	Coating Weight	Mix ratio
Plain films: BOPP/CPP, BOPP/PE, PET/PE, PA/PE,PET/CPP	1.0-1.3 g/ m <sup>2</sup>	100:60
Printed films: BOPP/PE, BOPP/CPP, PET/PE, PET/CPP	1.8-2.2 g/ m <sup>2</sup>	
PA/PE, PET/CPP, VMPET/PE, VMPET/CPP, AL/PE	1.4-1.6 g/ m <sup>2</sup>	
Printed PET/AL	1.8-2.2 g/ m <sup>2</sup>	
BOPP/VMOPP,BOPP/VMCPP, BOPP/VMPET	1.8~2.2g/ m <sup>2</sup>	100:65-70

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).

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

Item	Temperature °C	Remark
A Component	40~45 °C	When the temperature is low in winter, the temperature can be appropriately increased
B Component	35~38 °C	
Feeding Tube	35~40 °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	35~40 °C	
Coating Roller	35~40 °C	
Laminating	35~45 °C	
Curing Chamber	40~50 °C	
Curing time	> 4 hours (40~50 °C); > 12 hours (25 °C)	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 more than 4 hours. To ensure a suitable operating environment, please pay attention to

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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

Pack in steel barrel normally.

A-component is 200kg/barrel. B-component is 200kg/barrel. One 20GP container could be loaded with total 16000KGS net weight in total 80 barrels (200L)

### Safety & Storage

This product should be stored in the room without direct sunlight at temperature 15-25 °C, shelf life would be 12 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.