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SF9160A/SF9160B Solvent Free Polyurethane Adhesive

(Specially designed for laminating PET/VMPET, PET/VMCPP)

Description

SF9160A/SF9160B 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 withstands 100℃ water sterilization for 40 minutes, which offers expected performance of optical property and strength in lamination of PET/VMPET and PET/VMCPP

Declaration

OCHEM SF9160A/SF9160B 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 and 21, § 177.1395 of the FDA, Washington D.C., respectively
- Regulation (EC) No 1907/2006 concerning the REACH

Technical Properties

These properties are typical but do not constitute specifications.

Item	SF9160A	SF9160B
Type	Hydroxyl Terminated Polyurethane	Isocyanate Terminated Polyurethane
Ingredient	NCO	OH
Appearance	Yellowish transparent liquid	Yellowish transparent liquid
Density（g/cm^3）	1.13	0.97
Solid Content(%)	100%	100%
Viscosity (BKF25℃)	2000±500cps	500±200cps

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

Model	20℃	25℃	30℃	35℃	40℃	45℃
SF9160A	4100	2400	1700	1100	750	550
SF9160B	430	310	210	150	110	85

- In the first time of using this adhesive, please ensure the compatibility with your inks via tests.
- The adhesive should be used up in laminator within 40 minutes after 2-components mixed
- SF9160A:SF9160B recommended weight mix ratio is 100:70 and volume ratio is 100:81.54 The mix proportion of SF9160A/SF9160B can be from 100:60 to 100:75. It is recommended to use at 40°C or room temperature （25℃）. According to different operation requirements, the recommended usage amount is 1.0-2.0g/m2, please find following different recommended usage amounts in laminations of different films structures.

Films Laminating Structure	Usage Amount	Mix ratio
Plain films: BOPP/CPP, BOPP/PE, PET/PE, NY/PE,PET/CPP	1.0-1.3 g/ m^2	100:65
Printed films: BOPP/PE, BOPP/CPP, PET/PE, PET/CPP	1.2-1.6 g/ m^2	
VMPET/PE, VMPET/CPP	1.4-16 g/ m^2	100:70
Transparent PET/PET, Transparent PET/VMPET	1.6~1.8 g/ m^2	
Printed PET/PET, Printed PET/VMPET	1.8~2.0 g/ m^2	100:70

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 ℃	Remark
A Component	43~45 ℃	When the temperature is low in winter, the temperature can be appropriately increased
B Component	20~25 ℃	
Feeding Tube A	42~43 ℃	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.
Feeding Tube B	23~25 ℃	
Transfer Roller	38~42 ℃	
Dosing Roller	38~42 ℃	
Nip Roller	45 ℃	
Curing Chamber	40 ℃	
Curing time	> 24 hours	The special structures have to be curing for 48~72 hours, 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 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. In some cold area, please preheat the adhesive before laminating

- Normal running speed 100-180 M/min (depending on the matching situation with the ink). When it is about to rewind about 500 meters left, the speed drops to about 50 M/min to finish the left 500 meters.
- At the beginning of laminating metallised films, try to laminate at a low speed as much as possible, and increase the machine speed after skilled operation.
- After total laminating process done, please reserve the final laminates for 4~5 hours before entering into curing room.
- For 3-layers lamination, please reserve laminates of metallised films for 5 hours before starting laminating for the internal layer.
- When changing the ink or the ink formula is changed, please make sure to check the appearance before mass production

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/drum, B-component is 200kg/drum. One 20FCL could be loaded totally 16000KGS net weight in 80 drums

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.