



TECHNICAL DATA SHEET

Solvent Based Polyurethane Adhesive

Product Name: Polyurethane Main Agent – Code: EH 9000A

Product Name: Polyurethane Hardener – Code: EH 9000B

Description:

EH9000A / EH9000B is an Ester based two-component aromatic polyurethane adhesive specializing for Al foil laminating widely used in laminating of various treated films like BOPP, PET, PA, PE, CPP, AL, Paper, etc. The adhesive has excellent odorlessness, transparency, flexibility, and aging resistance. And it offers high initial bonding strength in aluminum/plastic laminating structure with high peel strength, good wetting of the films, excellent coating processability.

Technical Properties:

Item	EH9000A	EH9000B
Type	Main Agent	Hardener
Ingredient	Polyester polyol agent	Isocyanate-terminated Polymer
Appearance	Light yellow transparent liquid	Light yellow transparent liquid
Solid Content (%)	72±2	75±2
Viscosity m Pa. s(20 C)	4250±750	2500±1250
Solvent	Ethyl acetate	Ethyl acetate
Mix Proportion	5	1
Shelf life	360days	360days

Typical Features:

- **Environmental protection:** No exist solvent emissions pollution to the environment;
- **High efficiency:** For example, PET/AL laminating speed could be up to 250m/min, PET/PE laminating speed could be up to 450m/min
- **Wide application:** Widely used in laminating of various material like BOPP, PET, PA, PE, CPP, AL and Paper etc, with any model of dry laminator (automatic or manual mixing both can be used)
- **Temperature Resistance:** good resistance to 100°C/40 minutes water boiling and hot liquid filling
- **Stability:** very long-term stable peeling strength after packaging made.

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Recommended Operating Conditions:

- ◆ Application Method Anilox roller or flexo roller
- ◆ Anilox cylinder Anilox roller 100 -200 line (65-80 line per cm)
- ◆ Application solids 20 -40% (Recommend 30%)
- ◆ Pot Life Static 8 hours approximately
- ◆ Dynamic 24 hours approximately
- ◆ Drying Coating Weight Anilox roller 2.0-4.0gsm; flexo roller 2.0-3.0gsm
- ◆ Drying Section Temperature 50-60°C, 60-70°C, 70-80°C (three section)
- ◆ Laminating Temperature 50 - 80°C
- ◆ Cure Time 45 -55°C 24 hours for two-layer structure, 48 hours for three layer structure; faster curing performance is available as per special custom requirement.
- ◆ Cleaning Solvent Ethyl Acetate

Mix Ratio by Weight:

Solid Content (%)	Mixed Ratio		Operating Mix Ratio in Drums Weight		
	EH9000A	EH9000B	EH9000A	EH9000B	Ethyl Acetate (kgs)
40	20	20	110	4	19.5
35	20	20	80	4	27.7
30	20	20	60	4	33.6
25	20	20	46	4	45.6

Solvent is ethyl acetate, acetone, MEK, the water content should be less than 0.03%, the alcohol content should be less than 0.02%, Ethyl acetate is recommended.

Package:

Pack in steel drum normally.

Safety & Storage:

Store in cool, dry, well-ventilated area away from heat and ignition sources. Keep container tightly closed. Refer to MSDS for more safety information

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Standard:

EH9000A+EH9000B ensures that the final polymeric material or product complies with the 1935/2004/EEC regulation when used in accordance with GMP standards and as recommended in this data sheet.

EF9000A+EH9000B are manufactured in accordance with the manufacturing process as described in Directive 2023/2006/EC. For more information regarding food contact please contact info@eficazgroup.com

Attentions:

- When laminating different types of ink or transparent ink film, it is necessary to confirm whether it is suitable.
- The LDPE and CPP films must be corona-treated with a surface tension greater than 40 mN/m. The PA film must be double-corona treated as an intermediate layer. The surface tension of the PET film must not be Less than 52 mN/m.
- When laminating PET printed film, confirm whether the appearance meets the requirements or not with lab test at first
- If the contents of the package are corrosive, please confirm and start production
- The temperature and humidity of the environment have a great influence on the time for storing the configured adhesive. It is recommended to arrange the adhesive in small quantities for a few times in high temperature and high humidity weather to avoid waste
- During the laminating processing, care must be taken to check and control the viscosity.
- Residual adhesive: The remaining adhesive cannot be used in principle. If the amount of residual liquid is excessive, it shall be sealed and stored in cool place after dilution, which could be used as diluent for operation in next day, and a small amount shall be little by little added to the newly prepared adhesive solution. It cannot be used any more, if it appears cloudy, translucent or thickened.
- In actual production, if other types of EH solvent-based adhesive are replaced, the cylinder, pipelines and rollers may not be cleaned. If solvent free adhesives other than EH adhesives are replaced, the user must perform thorough cleaning of the feeding system.
- The concentration and additives in the film have an influence on the bonding strength of the laminated film and must be selected before use.
- Please stop using adhesive and then contact us when you find that the adhesive has become turbid or there is agglomeration.

Important notice:

These documents we provided are made on the basis of our recent knowledge and experience, all these terms we mentioned are only suitable in normal condition and could be used as references. Please test and affirm before formal production or contact with our technician to some especial structures of films and stuffs packed, we do not take on any legal duty for these documents.

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