

KIWOTHERM® L 110

1. DESCRIPTION

Heat sealable, Solvent based polyurethane adhesive

KIWOTHERM® L110 is used to bond a wide variety of materials (particularly plastics). Bonds made with KIWOTHERM® L110 have very good resistance to water, alcohol and mineral spirits. Both interior/ exterior applications are possible; test all new materials/ applications before production.

2. SUBSTRATES

Various plastics, paper, cardboard, and textiles.

Make sure all parts that come in contact with the adhesive are dry and free of mold release agents or similar substances such as fats, oil, wax, dirt, etc. This will ensure good adhesion.

It is important to test all substrates for compatibility. Though KIWOTHERM® L110 has very good resistance to plasticizer migration; a small percentage of plasticizers (roughly 5-10%) can attack KIWOTHERM® L110.

3. MESH SELECTION

Use: 85-185 threads/in or 34-72 threads/cm

S-type threads will give the best results.

4. STENCIL SELECTION

A solvent-resistant stencil must be used such as KIWOCOL POLY-PLUS S, SWR or KIWOCOL 31.

For information on screen coating, please refer to the technical data sheet for the particular emulsion.

5. REDUCING

KIWOTHERM® L110 is ready to use. If thinning is desired, use the minimal amount of KIWOSOLV® L74 that provides desired flow.

The maximum useable amount is 10%

6. APPLICATION METHOD

Screenprinting, knife coating. When screenprinting use a medium shore squeegee(60-70).

Optimal printing temperature: 18-25°C / 64-77°F
Recommended printing humidity: at least 60%Rh

7. DRYING

Drying of KIWOTHERM® L110 can be achieved at room temperature (30-60 minutes depending on temperature) or in conventional IR dryers at temperatures of 70-80°C or 158-176°F for a few minutes.

After drying and cooling sufficiently (to approximately 20°F/68°F), the coated substrates can be stacked. A release liner is not necessary.

8. CLEANING

Wet/Dry: KIWOSOLV® L74

9. HEAT SEALING/ BONDING

The working temperature of the heat transfer press when sealing KIWOTHERM® L110 should be approximately 100-120°C/ 212-248°F and should be applied for minimum 20-40 seconds.

10. DIE CUTTING

Parts printed with KIWOTHERM® L110 can be die-cut without fear of gumming the die

11. PHYSICAL PROPERTIES

BASE: Solvent-based polyurethane

COLOR: Wet: colorless
When chilled: milky white
Dried: transparent

VISCOSITY: Approx. 12,000 mPas
Rheomat STV, System CI, 20 rpm

SOLIDS CONTENT: Approx. 18%, ±1%

SPECIFIC GRAVITY: Approx. 0.99

VOC: 797 g/ltr
6.63 lb/gal (US)

FLASH POINT: 50°C (122°F)

PRECAUTIONS/ ENVIRONMENTAL IMPACT:

Please see the MSDS

STORAGE:

1 year at 20-25°C / 68-77°F in properly closed original container.

KIWOTHERM® L110 becomes hard & white when exposed to cool/cold temperatures. Treat by warming to room temperature (e.g.: warm water bath) followed by thorough stirring or agitation. Freezing and melting have no influence on adhesion.

12. PACKAGING

900g =Approx. 1 qt
4.5 kg =Approx. 1 Gal

13. ADHESION:

The bond with KIWOTHERM® L110 can be improved by:

A. Using parts. free of mold release agents or substances such as fats, oil, wax, dirt, etc. (Make sure all parts that come in contact with the adhesive are dry.)

B. Optimum application temperature : 100-120°C/ 212-248°F for minimum 20-40 seconds.

C. Sufficient adhesion surface area relative to total surface area.

14. PRECAUTIONS:

The following facts have to be considered:

A. Check the specifications/ requirements for the bond such as bond strength, climate and temperature resistance.

B. Choose a suitable substrate and test for compatibility with the KIWOTHERM® L110. This product has very good resistance against plasticizer migration; however, one must always test because a small percentage of plasticizers (roughly 5-10%) may attack it. *Example: the plasticizers from some soft PVC's may interact with the adhesive layer.*

C. If direct contact between printing ink and adhesive will occur, test for compatibility, as some inks may interact with the adhesive layer. Long term compatibility with the applied printing inks and substrates is of special importance.

All products mentioned in this technical data sheet are available through KIWO. For further information contact KIWO at 1-800-KIWO-USA or adhesive@kiwo.com.

Thank you for choosing KIWO.