

KIWOPRINT® TC 1550 T

1. DESCRIPTION

Crosslinking, solvent based pressure sensitive adhesive

KIWOPRINT TC 1550 T is a high quality, transparent pressure sensitive adhesive for the production of self adhering materials made of cardboard, rigid PVC, polycarbonate, polyester, polyethylene, polypropylene, glass, metal and industrial foams to self adhering items. Especially suitable for ink transfers applied by wet or dry transfer method. The adhesive film is colorless and transparent. In general, the adhesive film is sufficiently light fast; however, if placement in direct sunlight is expected, testing is essential.

Bondings are resistant to water, diluted watery acids and alkali solutions, as well as to many mineral oils.

Materials coated with KIWOPRINT TC 1550 T can be stored for a minimum of 1 year without any decrease of adhesive strength, if covered with a suitable silicone release paper and kept dry and dark at room temperature.

2. APPLICATION/ PROCESSING

METHOD

Screen printing, roll coating, or brush. When screen printing use a medium shore squeegee (~70 durometer / Shore A).

MESH SELECTION

Range: 18 - 77 threads/cm or 46 - 195 threads/in. For the production of ink transfers use screen meshes between 68 – 77 threads/cm or 115 - 195 threads/in. The coarser the mesh, the higher the adhesive strength.

Adhesive coverage is approx. 40 g/m² or 243.9 ft²/kg when applied to polyester using 51 threads/cm or 125 threads/in mesh, depending on application conditions.

STENCIL SELECTION

Solvent-resistant direct emulsions must be used such as KIWOCOL POLY-PLUS S, SWR or HV.

REDUCING/ CLEANING

The ideal printing temperature is approx. 20°C / 68°F. At higher working temperatures KIWOPRINT TC 1550 T must be thinned with approx. 5% KIWOSOLV L 14 to avoid string formation or webbing.

Test all modifications before using in production. Reducing the adhesive can negatively influence printing characteristics and peel strength.

DRYING

At room temperature or using conventional tunnel dryers for industrial production. The adhesive must be completely dry and transparent before a release liner is applied or further processing undertaken. Drying time depends on the adhesive quantity, substrate type, drying temperature and air circulation. Only properly dried adhesive films give the highest bond values.

Guide values (90µ wet adhesive thickness):

| | |
|-----------------|-----------------|
| At 20°C or 68°F | Approx. 40 min. |
| At 70°C or °F | Approx. 2 min. |

DIE-CUTTING

KIWOPRINT TC 1550 T may be die-cut.

BACKLIT PARTS

Back-lit windows should not be covered with adhesive as this will change the light quality/intensity.

NOTICE

The suitability of the adhesive together with each component i.e. substrate, ink, liner, adhesion partner etc. must be tested before production parts are made. Special attention should be paid to long term compatibility with component materials. Also one must check the influences of the line material and the state or nature of the substrate's structure or roughness. Silicone release agents, plasticizer migration etc. must be checked for and ruled out before one continues.

3. TECHNICAL DATA

PEEL STRENGTH ~ 15 N/cm ; 3.405 lb/in

Peel angle 180°, Measured on a shear tension meter by BE-T-EX per ASTM. Bonding area: 2.5 x 10 cm or 1 x 4 inches, 90µ adhesive wet film thickness with hand roller onto polyester film.

Notice: The peel strength depends on the surface structure of the adhesive film (which differs depending on the method of application) and the applied coating thickness.

TACK STRENGTH ~Approx. 1,000 g.

Measured with Polyken Tack Tester.

Notice: When screen printing, slightly lower values can be achieved due to the mesh structure of different meshes.

4. PROPERTIES

BASE: Synthetic Rubber in solvent solution

COLOR: slightly yellow, dries transparent

TEMPERATURE RESISTANCE: -20°C to +60°C

-4°F to +140°F

Tested with 10 x 2.5 cm or 4 x 1 in adhesive area, 90µ wet adhesive thickness, polyester bonded to stainless steel, 30g load.

VISCOSITY: Approx. 2,600 mPas
(RM 180, DIN 53019, MS = 33, D = 100 s⁻¹)

SOLIDS CONTENT: Approx. 49%

DENSITY: Approx. 0.92 g/ccm

VOC: 455 g/l
3.8 lbs/Gal

FLASH POINT: 34°C or 93.27°F

PRECAUTIONS/
ENVIRONMENTAL
IMPACT: Please see the MSDS

STORAGE: 1 year @ 20-25°C / 68-77°F in properly closed original container

5. PACKAGING

4.5 kg = Approx. 1.278 Gal
180 kg = Approx. 51.12 Gal

6. ADHESION:

Adhesion can be improved by:

- A. Using parts free of mold release agents or substances such as fats, oil, wax dust impregnations, etc. (Make sure all parts that come in contact with the adhesive are dry.)
- B. Optimum application temperature : 20-60°C.or 68-140°F
- C. Additional pressure (approx.: 3-4 bar) with a heated silicone rubber pad 40-50°C.or 104-122°F
- D. Preventing air bubbles and stretching the substrate during application.
- E. Flat and smooth substrate (i.e. pressure molding parts without burrs or sprue marks.)
- F. Sufficient adhesion surface area relative to total surface area.

7. Additional information

For additional product information, please visit our web site at www.kiwo.com. All products mentioned in this technical data sheet are available through KIWO Inc. and its distributor network. For further information contact your KIWO distributor or KIWO direct.

Thank you for choosing **KIWO**.