TECHNICAL DATA SHEET

KIWOPRINT TC2500/1

1. DESCRIPTION

Solvent based pressure sensitive adhesive

KIWOPRINT TC 2500/1 is a high performance screenprintable adhesive for instrument panels, touch panels, or appliques in the automotive/ electronic industries. Depending on the characteristics of the substrate, materials bonded with KIWOPRINT TC 2500/1 are very difficult to remove or even permanent.

2. ADHESIVE PERFORMANCE

Data from adhesive screenprinted on 50µ PET film

WET FILM THICKNESS	90µ / 3.6 mil
THEORETICAL DRY FILM THICKNESS*1	40µ
THEORETICAL COVERAGE	90 ml/m^2 453 FT^2/GAL
TAC VALUE *2	1,000-1,200g
PEEL VALUE: 72hr *3	25 N/cm 5.7 lbs/in

*****1 Calculated figure. *****2 90µ wet film thickness. Measured with Polyken Tack Tester, 1 sec. adhering, pull-off speed: 0.5 cm/sec. *3Peel strength per PSTC 1, measured in N/cm. on Lloyd type L500 with load cell 100N, Class 1, DIN 51221 for tension & compression. Peel speed: 300mm/min. Bonded to polished stainless steel (raw material 1.4301) with hand roller as per PSTC standard: roller weight 10 lbs, 5 times each direction. Bonding area 1 x 4 inches.

3. STATIC SHEAR

At least 1,000 minutes Adhesive deposit 90µ wet, @20°C / 68°F, printed on polyester; applied to polished stainless steel; 1 in^2 overlap, 2.24 lb / 1 kg weight; measured on ETS Shear tester: Mark 6 per FINAT #8

4. SUBSTRATES

Rigid PVC, glass, metal, cardboard and industrial foams as well as polycarbonate, polyester, polyethylene and polypropylene and other industrial plastics can be used with KIWOPRINT TC 2500/1. *Polystyrene may also be used, though it must be noted the solvent may craze the surface. If visibility of the crazed surface is not a problem, the crazing may actually contribute to higher peel strength*.

NOTE: It is important to test all substrates for their suitability. (i.e. plasticizers in soft PVC may soften the adhesive resulting in reduced adhesion.)

5. MESH SELECTION

Use: 5*4T - 196T threads/in* or 21T - 77T threads/cm. During mesh selection, it is important to understand the higher the wet ink deposit is, the greater the peel strength will be. The rule in general is: coarser thread counts deposit more adhesive. *Continued next column* There are exceptions; so it is best to refer to the manufacturer's mesh specifications to aid in making your selection

6. STENCIL SELECTION

Solvent-resistant direct emulsions must be used such as KIWOCOL POLY-PLUS S, SWR or KIWOCOL 31.

7. REDUCING

KIWOPRINT TC 2500/1 is ready to use. When desired, the adhesive can be reduced using Kiwo Reducer L14s up to 10%.Reducing the adhesive can negatively influence printing characteristics and peel strength.

8. DEFOAMING

KIWOMIX ZL 1058 can be used if the adhesive foams during printing. The proper ratio is: 1-3% KIWOMIX to 100% KIWOPRINT TC 2500/1. Start with a minimum amount (.5 to 1%) of KIWOMIX. Increase only as needed. Use of more than 3% KIWOMIX will noticeably reduce peel strength.

Test all modifications before using in production.

9. ADHESIVE COLORS

Pigmenting the adhesive can reduce the peel strength; therefore, it is not recommended.

Colored Kiwoprint TC or L products are available in full batch (~800 Kg) quantity on special order.

10. APPLICATION METHOD

Screenprinting, knife coating, brush. When screenprinting use a medium shore squeegee(60-70). The optimal printing temperature is 18-25°C / 64-77°F

11. DRYING

By room temperature or conventional IR dryers. Drying time depends on type and quantity of adhesive, substrate, drying temperature, humidity, and air movement.

KIWOPRINT TC2500/1

The following figures are only a guide. Your drying environment may yield different values. (Continued).

MESH COUNT	20°C / 68°F	70°C / 158°F
21 T/cm / 54 T/in	90 min.	3 min.
34 T/cm / 86 T/in	60 min.	2.2 min.
43 T/cm /110 T/in	50 min.	2 min.
77 T/cm / 196 T/in	30 min.	1 min.

Only properly dried adhesive films give proper performance and high peel values.

12. CLEANING

Wet/Dry: Reducer L14s

13. DIE CUTTING

To avoid problems during die-cutting, die line should be at a distance of 0.5 - 1mm from the adhesive layer.

14. BACKLIT PARTS

Backlit windows should not be covered with adhesive as this will change the light intensity.

15. PHYSICAL PROPERTIES

BASE: Rubber in solvent containing butylacetate

COLOR: Wet: colorless to slightly yellow
Dried: transparent to slightly yellow

TEMPERATURE RESISTANCE: -4°F to 180°F under 30g load
-20°C to 82°C under 30g load

VISCOSITY: Approx. 2,500 – 3,000 mPas
Rheomat STV, System DII, 20°C / 68°F

SOLIDS CONTENT: Approx. 46% ±1%

DENSITY: Approx. 0.92 g/ccm

VOC: 487 G/ltr
4.05 lbs/Gal

FLASH POINT 41°C / 106°F

PRECAUTIONS/
ENVIRONMENTAL IMPACT: Please see the MSDS

STORAGE: At least 1 year at 20°C / 68°F in properly closed original container

16. PACKAGING

900 g =Approx. 1 qt
4.5 kg =Approx. 1 Gal
25 kg =Approx. 5.5 Gal

17. ADHESION:

Bonding with KIWOPRINT TC 2500/1 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.

18. PRECAUTIONS:

The following recommendations need to be considered:

A. Check the specifications/ requirements such as tack values, peel strength, climate, temperature and UV resistance.

B. Choose a suitable substrate and test for compatibility with the KIWOPRINT TC 2500/1. Example: soft PVC 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. Also, test the influences of the liner material and the substrate quality (roughness, residues from separating agents and plasticiser migration.)

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

Thank you for choosing KIWO.

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