

TACSIL F20

Flexible PCB Carrier Tape

Excellent Dimensional Stability
Superior Adhesion Strength to 250°C
Enables Precise Surface Mounting
Easy Application & Removal
Longer Life Versus Standard Polyimids

TACONIC

An ISO 9001:2000 Registered Company

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APPLICATIONS

Flip Chip Mounting

LCD Assembly

SMT Process / Flexible PCBs

SMT Process / Thin Rigid
PCBs

TACSIL F20

TACSIL F20 is a direct result of Taconic's experience in composite material development. It is comprised of a PTFE coated fiberglass substrate with a high temperature silicone adhesive on one side and a silicone compound on the other to create a superior Flexible Printed Circuit Carrier tape.

TACSIL F20 was specifically engineered to out-perform standard polyimide tapes and double sided tapes in the rigorous SMT process. TACSIL F20 has been tested to exceed 500 cycles in a normal SMT process, while many previous carrier tapes were not reusable, translating into a significant cost savings over all.

HOW TO USE

- Clean surface of carrier boards using alcohol.
- Peel release liner off of adhesive side, using care.
- Place the adhesive side of the TACSIL F20 carrier tape onto the carrier board, use a rubber roller to insure uniform bonding.
- Peel release liner off of silicone surface. Use dust free gloves to minimize contamination.
- Place flexible printed circuits on the silicone surface. For rigid printed circuits, a rubber roller may be used for added adhesion.
- If using a Durostone carrier board, pre-aging of the board is necessary. (Refer to CARRIER BOARD MATERIALS, below)

CONVERTING

If custom cut sizes of TACSIL F20 are desired, use cutting machines including a fodder chopper or diecutting M/C for precise cuts.

CARRIER BOARD MATERIALS

TACSIL F20 can be directly applied to aluminum or metal carrier boards. If you are using a Durostone board, it is recommended that you do pre-aging of the board to remove entrapped air before applying TACSIL F20.

- Pass Durostone board through SMT reflow chamber at typical operating temperatures 2-3 times repeatedly.
- Apply TACSIL F20 before Durostone carrier cools to room temperature.
- This process will prevent bubbles from forming during SMT process and will extend usable life of TACSIL F20.

STORAGE

To ensure longest possible life of TACSIL F20, store at 23°C +/- 2°C, 50% RH, +/- 2%.

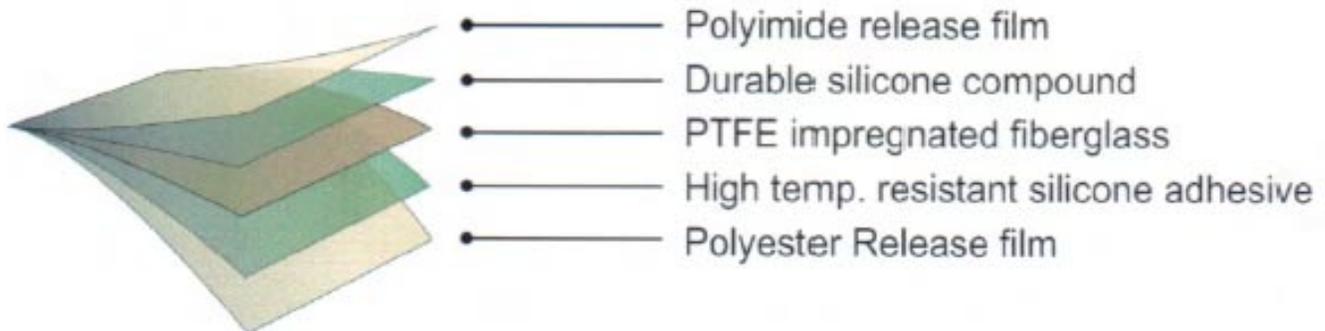
Keep TACSIL F20 away from direct sunlight, oils and other contaminants.

TACSIL Typical Values

Property	Test Method	Value		Unit	Value		Unit
		F20	F21		F20	F21	
Product		F20	F21		F20	F21	
Silicone Surface Resin Thickness		0.0028	0.0028	inch	0.07	0.07	mm
Substrate Thickness		0.0031	0.0031	inch	0.08	0.08	mm
PSA Thickness		0.0020	0.0020	inch	0.05	0.05	mm
180° Peel Adhesion on SUS (PSA)	ASTM D330	>7	>7	N/25mm	>7	>7	N/25mm
180° Peel Adhesion on SUS (Resin)	ASTM D330	>0.4	>0.1	N/25mm	>0.4	>0.1	N/25mm
180° Peel Adhesion - Polyimide Film on Silicone Surface Resin	JIS Z 0237 (Room Temperature)	>0.3	>0.1	N/25mm	>0.3	>0.1	N/25mm
180° Peel Adhesion - Polyimide Film on Silicone Surface Resin	JIS Z 0237 (After 250°C x 2hr)	>0.3	>0.1	N/25mm	>0.3	>0.1	N/25mm
Holding Power (PSA)	ASTM D3654 (2.2 psi @ 260°C x 2 hr)	No creep, AF	No creep, AF		No creep, AF	No creep, AF	
Tensile Strength	ASTM D3759	>500	>500	N/50mm	>500	>500	N/50mm

All reported values are typical and should not be used for specification purposes. In all instances, the user shall determine suitability in any given application.

Structure of TACSIL F20 FPCB Carrier Tape



- Polyimide Release Film protects the silicone compound from contamination
- Durable Silicone Compound creates a uniformity of adhesion strength during SMT process, no silicone residue is transferred to flexible printed circuit board materials
- PTFE Impregnated Fiberglass acts as reinforcing material which creates excellent dimensional stability
- High Temperature Resistant Silicone Adhesive is specifically developed for the electronics industry, leaving no adhesive residue after removal from the carrier plate

TACSIL F20

CLEANING

For extended life of TACSIL F20, periodic surface cleaning is recommended.

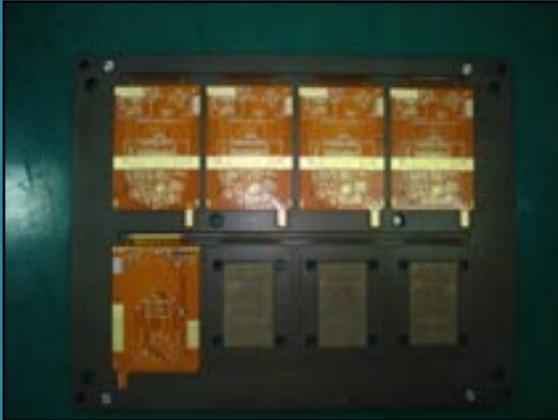
- For use in contaminate free environments, cleaning is recommended every 50 uses.
- For use in areas of high contamination, cleaning is recommended every 25-30 uses.

CLEANING MATERIALS

Both IPA (Isopropyl alcohol) and Ethyl alcohol are available as cleaning agents. Ketones (including Acetone or MEK) or hydrocarbon solvents (including Toluene and Xylene) are not recommended.

CLEANING METHOD

- Obtain Isopropyl alcohol (IPA), dust proof cloth, and wooden stick or rod. Wind the dust proof cloth around the stick.
- Immerse the cloth in the IPA.
- Remove the contamination on the surface of the TACSIL F20 by rolling the IPA immersed cloth over it.
- Let surface completely dry and then reuse in your process.



FPCB affixed to TACSIL F20



TACSIL F20 in SMT process



IPA, cloth & rod



Roll cloth over contaminated surface



Contaminate free
TACSIL F20



Dry thoroughly before
reusing

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