Flexible copper clad Laminate：

◆ Product Property

- High peel strength
- Excellent dip soldering resistance
- Good dimension stability and excellent chemical resistance
- Good flexibility and excellent heat resistance

◆ Product Category

- PI FCCL (single/double-sided)
- High Tg tempetature FCCL(single/double-sided)
- High Tg &Halogen free FCCL (single/double-sided)
- Adhesiveless FCCL

◆Product Specification

- Copper foil :1/3,1/2,1
- Adhesive :10,13,20
- PI film :1/2,1
- Tg temperature (High Tg temperature FCCL) ≥ 90°C

◆Technical Index

Item		Unit	Condition	Index	Test method
Peel strength	Original	N/mm	90°peel	≥1.20	IPC-TM-650 2.4.9
	After 180℃ thermaltreatment			≥1.00 No bubble ,no delamination	
	After 260℃thermalshock			≥1.00 No bubble ,no delamination	
	After soaking into chemical solvent			≥1.00 No bubble ,no delamination	
Dip soldering resistance		°C	320°C×60 sec	pass	IPC-TM-650 2.4.13
Flexual fatigue(min)		times	——	500	JISC 6471 8.2
Tg temperature		°C	TMA	≥90	FeiHong
	MD	%	——	-0.1~+0.1	JISC6471 9.6
	TD			-0.1~+0.1	
Water Absorption		%		≤1.00	IPC TM 650 2.6.2
Volume resisvity recovered from wet and thermal treatment(min.)		MΩ	——	10^6	JIS C 6471 7.2
Vertical laminated electric strength (min.)		MV/m	——	25	JIS C 6471 9.2
Bear MedicineCharacter		IPA	——	Good	
		4mol/L HCL			
		2mol/L NaOH			
Halogen Free		ppm	——	Cl+Br<900ppm	SGS
UL Flame Class		Grade	V—0	pass	UL94
Shelf life			≤25℃≤ 65％	12	FeiHong

Note:the above figures are typical data,but not guaranteed data。
Remark:we can manufacture materials according to the requests of user。

Coverlay Film:

◆Product Property

- High peel srength and good dielectric propery
- Excellent chemical resistance
- Excellent dimension stability
- Low resin fluditv

◆product category

- PI CL
- High Tg Temperature CL
- High Tg Temperature&Halogen free CL

◆Product Specification

- Adhesive :10,13,25
- PI film:1/2,1
- Tg temperature (High Tg temperature CL)⩾90°C

◆ Technical Index

Item		Unit	Condition	Index	Test method
Peel strength	Original	N/mm	90°C Peel	⩾1.20	IPC-TM-650 2.4.9
	After180°Cthermal treatment			⩾1.0 No bubble ,no delamination	
	After 260°Cthermal shock			⩾1.0 No bubble ,no delamination	
Dip oldering resistance		°C	300°C×60sec	pass	IPC-TM 650 2.4.13
Insulation resistance		Ω	—	10^{11}	JISC6471 7.1
Dimension stability	MD	%	—	-0.4~0	JISC6471 9.6
	TD			-0.2~0	
Resin flow		μm		⩽100	JISC 6471 8.2
Water Absorption		%	–	⩽1.00	IPC TM 650 2.6.2
BearMedicineCharacter	IPA	—	Good	—	JISC 6471 9.2
	2mol/L HCL				
	4mol/L NaOH				
Tg temperature		°C	TMA	⩾90	FeiHong
Halogen Free		ppm	—	Cl+br<900ppm	SGS
UL Flame Class		Grade	V－0	Pass	UL94
Shelf life		months	0°C ± 5°C	6	FeiHong

Note:the above figures are typical data.but not guaranteed data
Remark:we can manufacture materials according to the requests of user。

Thermosetting FPC adhesive sheet:

Advantages

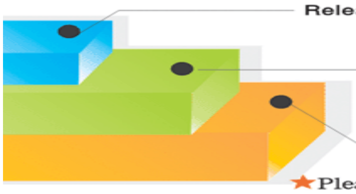
- FR36 series has high bonding reliability
- FR36 series has high tolerance for lead free reflow soldering prosess after absorbed moisture with Substrate
- FR36 series can be applied for temporary laminate with initial tack.

Application

- FR36 series can be applied for FPC Reinforcing board which required high Heat resistance at lead free reflow soldering Process.
- Kinds of reinforcing board FPC,FR-4,polyimide(PI),aliminum(AL),SUS

Basic structure and product size

Width (mm)	length (m)
500	100
250	100



★Please use after releasing film and paple

Press machine condition

- 【Long press】

Pressing temperature: 170±5°C
Pressure: 3-4Mpa(=30~40kg/cm²)
Time: 30~40min
Curing: nothing

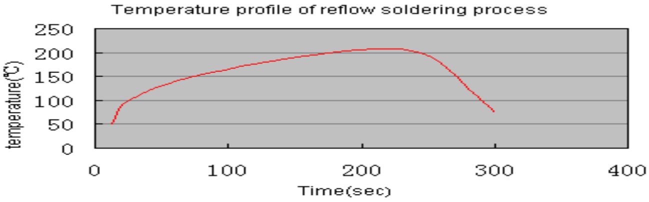
- 【Quick press】

Press temperature : 170±5°C
Pressure: 1.5~2.5Mpa(=20~30kg/cm²)
Time: 2-5min
Curing: 160°C×20min

Characteristics

Item	Unit	Condition	FR3613	FR3620	FR3635	Test method
Adhesive thickness	um	—	35	25	13	JISC6471 8.1.5
90℃Peel strength	N/mm	—				
Vs SUS			1.40	1.38	1.40	
Vs FR-4			2.00	2.10	2.00	
Vs PI			1.80	1.80	1.88	
Vs FPC			1.12	1.10	1.08	
Dip soldering resistance	°C	—	300	300	300	IPC-TM-650 2.4.13
Moist reflow heat resistance	—	96/60/90 Time(h) /temperature(°C) /humidity(%)	Pass	Pass	Pass	JISC6471 7.2
Tg temperature	°C	TMA	70			FeiHong
UL Flame class	Grade	V-0	pass			UL94
Shelf life	Months	0°C±5°C	3			Feihong

Temperature profile of reflow soldering process



Note: This Technical Data is based on our reliable experiments. However,it does not mean that the performance described in this report is guaranteed.Use the products under your responsibility after sufficiently studying the intended use and service condition of the products.

Bonding sheet：

◆Prodoct Property

- High Peel Strength and good dielectric property
- Excellent dimension stability and good chemical resistance
- Low resin fluidiv
- Leave an operation good

◆Product Specification

- Releasing Paper :100
- Adhesive :13.20.35
- Releasing film: 36

◆Technical Index

Item	Unit	Condition	Index	Test method
Peelstrength	N/mm	90 °peel	—	IPC-TM-650 2.4.9
Vs SUS			≥1.00	
Vs FR-4			≥1.20	
Vs PI			≥1.20	
Vs FPC			≥1.20	
Moist reflow heat resistance	—	Time(h)/temperature(°C)/humidity(%) 96/60/90	Pass	JIS C6471 8.1.5
Dip soldering resistance	°C	300 °C*60sec	Pass	IPC-TM-650 2.4.13
Resin flow	mm	–	≤0.1	IPC-TM-650 2.3.17
Tg temperature	°C	TMA	70	FeiHong
UL Flame class	Grade	V－0	pass	UL94
Shelf life	months	0°C ±5°C	3	FeiHong

Note:the above figures are typical data,but not guaranteed data.
Remark:we can manufacture materials according to the requests of user.