



# S1141

(UL ANSI:FR-4)UV Blocking

## 特点

- Tg140℃ (DSC)。
- UV Blocking/AOI兼容。
- 优良的机械加工性能。

## FEATURES

- Tg140℃ (DSC).
- UV Blocking/AOI Compatible.
- Excellent mechanical processability.

## 应用领域

电脑、仪器仪表、摄像机、通讯设备、电子游戏机、汽车、航空等。

## APPLICATIONS

Computer,Instrumentation,VCR, communication equipment,electronic game machine,automotive electronics, aviation,and etc.

## GENERAL PROPERTIES

| Test Item                  |           | Treatment Condition                | Unit    | Property Data     |                     |
|----------------------------|-----------|------------------------------------|---------|-------------------|---------------------|
|                            |           |                                    |         | SPEC              | Typical Value       |
| Tg                         |           | DSC                                | ℃       | ≥130              | 140                 |
| Flammability               |           | C-48/23/50                         | Rating  | V-0               | V-0                 |
|                            |           | E-24/125                           |         |                   |                     |
| Volume Resistivity         |           | After moisture resistance          | M Ω -cm | ≥10 <sup>6</sup>  | 5.2×10 <sup>8</sup> |
|                            |           | E-24/125                           |         | ≥10 <sup>3</sup>  | 5.2×10 <sup>6</sup> |
| Surface Resistivity        |           | After moisture resistance          | M Ω     | ≥10 <sup>4</sup>  | 5.4×10 <sup>7</sup> |
|                            |           | E-24/125                           |         | ≥10 <sup>3</sup>  | 5.6×10 <sup>6</sup> |
| Arc Resistance             |           | D-48/50+D-0.5/23                   | S       | ≥60               | 120                 |
| Dielectric Breakdown       |           | D-48/50+D-0.5/23                   | KV      | ≥ 40              | 60                  |
| Dielectric Constant (1MHz) |           | C-24/23/50                         | -       | ≤ 5.4             | 4.6                 |
| Dissipation Factor (1MHz)  |           | C-24/23/50                         | -       | ≤ 0.035           | 0.015               |
| Thermal Stress             | Unetched  | 288℃,solder dip                    | -       | > 10s             | 60s                 |
|                            | Etched    |                                    |         | No delamination   | No delamination     |
| Peel Strength              | 1oz       | 288℃,10s                           | N/mm    | ≥ 1.05            | 1.8                 |
|                            | Cu. Foil  | 125℃                               |         | ≥ 0.70            | 1.6                 |
| Flexural Strength          | LW        | A                                  | MPa     | ≥ 415             | 600                 |
|                            | CW        |                                    |         | ≥ 345             | 500                 |
| Water Absorption           |           | D-24/23                            | %       | ≤ 0.80            | 0.15                |
| CTE Z-axis                 | Before Tg | TMA                                | μ m/m℃  | -                 | 65                  |
|                            | After Tg  | TMA                                | μ m/m℃  | -                 | 300                 |
|                            | 50~260℃   | TMA                                | %       | -                 | 4.5                 |
| Td                         |           | 10℃/min,N <sub>2</sub> ,5% Wt Loss | ℃       | -                 | 310                 |
| T260                       |           | TMA                                | min     | -                 | 15                  |
| T288                       |           | TMA                                | min     | -                 | 2                   |
| CTI                        |           | IEC60112 Method                    | V       | PLC 3(175V--249V) | PLC 3               |

Remarks: 1.Specification sheet:IPC-4101/21, is for your reference only.

2.All the typical value is based on the 1.6mm specimen,while the Tg is for specimen ≥0.50mm.

3.All the typical value listed above is for your reference only, please turn to Shengyi Sci.Tech.Co., Ltd. for detailed information, and all rights from this data sheet are reserved by Shengyi Sci.Tech.Co., Ltd.

Explanations: C = Humidity conditioning; D = Immersion conditioning in distilled water; E = Temperature conditioning.

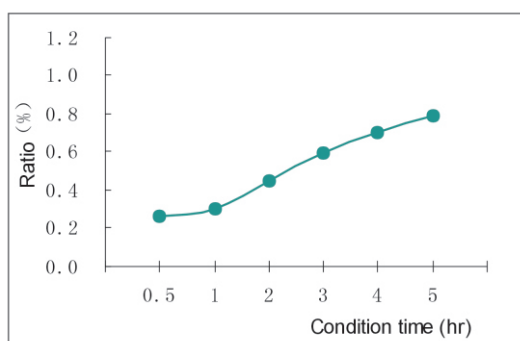
The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in ℃ and with the third digit the relative humidity.



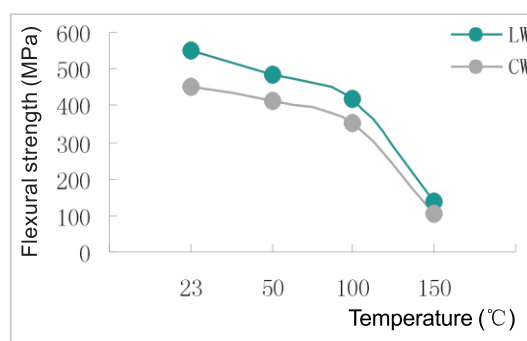
# S1141

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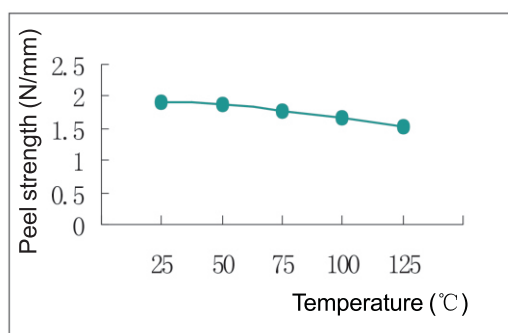
## Water absorption at pressure cooker



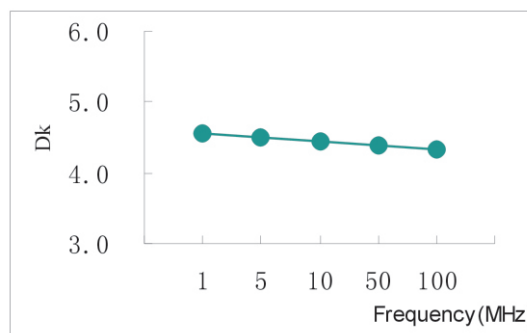
## Flexural strength



## Peel strength



## Dielectric constant



## PURCHASING INFORMATION

| Thickness       | Copper foil | Standard Size              |                          |
|-----------------|-------------|----------------------------|--------------------------|
| 0.05mm to 3.2mm | 12 μ m      | 1,020×1,220mm (40" × 48" ) | 915×1,220mm (36" × 48" ) |
|                 | to 105 μ m  | 1,070×1,220mm (42" × 48" ) |                          |

- ❖ Other sheet size and thickness could be available upon request.
- ❖ UL认可单、双面PCB板，最小厚度0.38mm。



# S0401 PREPREG

(UL ANSI:FR-4) Bonding Prepreg For S1141

## 特点

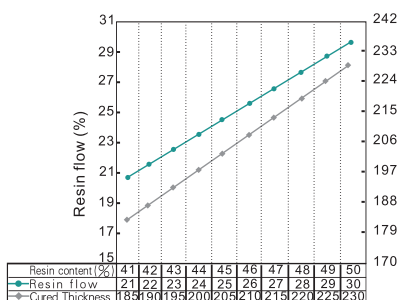
- Tg140℃ (DSC)。
- UV Blocking/AOI兼容。
- 优良的粘结性能，作业窗口宽。

## FEATURES

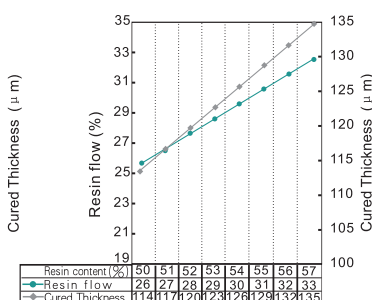
- Tg140℃ (DSC) .
- UV Blocking/AOI Compatible.
- Excellent bonding strength ,wide operating window.

## PREPREG PARAMETERS

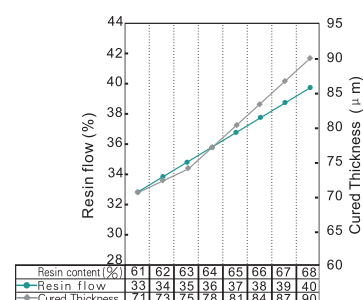
### 7628 TYPE PREPREG



### 2116 TYPE PREPREG



### 1080 TYPE PREPREG



| Designation | Glass fabric type | Performance | Gel time (sec) | Resin Content (%) | Resin flow (%) | Cured Thickness (μm) | Standard Size (roll type) |
|-------------|-------------------|-------------|----------------|-------------------|----------------|----------------------|---------------------------|
| S0401       | 106               | UV Blocking | 160±20         | 71±3              | 37±5           | 50±10                | 1,260mm×114.3m (125yards) |
|             | 106LD             |             |                | 71±3              | 37±5           | 50±10                |                           |
|             | 1078LD            |             |                | 64±3              | 36±5           | 78±10                |                           |
|             | 1080              |             |                | X±3               | X±5            | X±10                 |                           |
|             | 1086LD            |             |                | 61±3              | 33±5           | 78±10                |                           |
|             | 2112              |             | 150±20         | 57±3              | 30±5           | 90±15                |                           |
|             | 2113              |             |                | 56±3              | 26±5           | 100±15               |                           |
|             | 2313              |             |                | 55±3              | 26±5           | 100±15               |                           |
|             | 3313              |             |                | 55±3              | 26±5           | 100±15               |                           |
|             | 2116              |             |                | X±3               | X±5            | X±15                 |                           |
|             | 2165              |             |                | 52±3              | 26±5           | 140±15               |                           |
|             | 1500              |             |                | 45±3              | 22±5           | 160±15               |                           |
|             | 7628              |             |                | X±3               | X±5            | X±20                 |                           |

Type, Resin Content and Size Could be Available Upon Request

## Prepreg Test Method

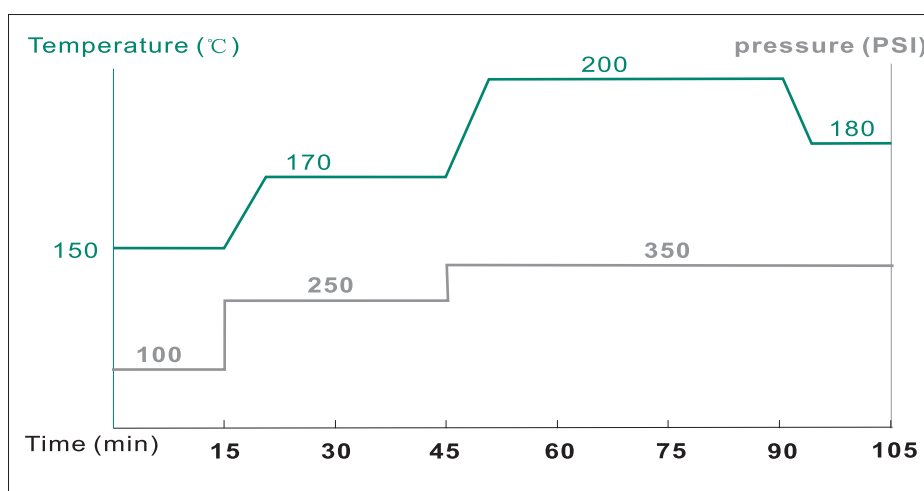
- Resin Content, Resin Flow, Gel Time: IPC-TM-650



# S0401 PREPREG

(UL ANSI:FR-4) Bonding Prepreg For S1141

## HOT PRESSING CYCLE



Heat-up rate: 1.0~2.5°C/min(80~140°C)

Curing time: >30min(170~180°C)

The hot pressing parameters is for your reference only, please turn to Shengyi Sci.Tech.Co., Ltd for detailed information.

## PREPREG STORAGE

### STORAGE CONDITION

- Three months when stored at <23 °C and <50% RH .
- Six months when stored at <5 °C . Normalize in room temperature for at least 4h before using.
- Beware of moisture, always keep wrapped in damp-proof material. Were kept in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.
- Avoid UV-rays and strong light.