

## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

## 环氧玻纤布半固化片

## 特点

- 层间粘合力好，流胶量合适
- 绝缘层厚度稳定，电气特性优秀
- 操作范围宽，性能重复性良好

## Features

- Excellent interlayer bonding strength with optimum flow
- Consistent dielectric thickness and electrical characteristics
- Wide processing tolerance and consistent performance

## General Properties 一般特性

| UL Designation<br>UL 型号 | PP style<br>类型 | Resin Content (%)<br>树脂含量 | Gel Time (sec/171°C/160°C)<br>胶化时间        |         | Resin Flow (%)<br>流动性 | DK (1MHZ)<br>介电常数 | Thickness Perply (mil)<br>压合厚度 |
|-------------------------|----------------|---------------------------|---|---------|-----------------------|-------------------|--------------------------------|
|                         |                |                           | KB-6050<br>KB-6060<br>KB-6068<br>PP-HF140 | KB-6064 |                       |                   |                                |
| KB-6050<br>(FR-4.0)     | 106            | 70±3                      | 100±30                                    | 100±30  | 40±5                  | 3.87±0.25         | 2.0±0.2                        |
|                         | 1067LD         | 65±3                      | 100±30                                    | 100±30  | 40±5                  | 3.89±0.25         | 2.1±0.3                        |
|                         | 1067LD         | 70±3                      | 100±30                                    | 100±30  | 40±5                  | 3.85±0.25         | 2.4±0.3                        |
|                         | 1067LD         | 75±3                      | 100±30                                    | 100±30  | 40±5                  | 3.80±0.25         | 3.0±0.4                        |
|                         | 1078LD         | 61±3                      | 100±30                                    | 100±30  | 40±5                  | 3.92±0.25         | 2.6±0.3                        |
|                         | 1078LD         | 65±3                      | 100±30                                    | 100±30  | 40±5                  | 3.85±0.25         | 3.0±0.3                        |
|                         | 1086LD         | 61±3                      | 100±30                                    | 100±30  | 40±5                  | 3.95±0.25         | 2.8±0.4                        |
|                         | 1086LD         | 65±3                      | 100±30                                    | 100±30  | 40±5                  | 3.87±0.25         | 3.0±0.4                        |
| KB-6060<br>(FR-4UV)     | 1037LD         | 68±3                      | 100±30                                    | 100±30  | 40±5                  | 3.86±0.25         | 1.8±0.2                        |
|                         | 1037LD         | 72±3                      | 100±30                                    | 100±30  | 50±5                  | 3.80±0.25         | 2.1±0.3                        |
|                         | 1080LR         | 61±3                      | 115±30                                    | 105±30  | 40±5                  | 3.95±0.25         | 2.8±0.4                        |
| KB-6064<br>(Tg140)      | 1080           | 63±3                      | 110±30                                    | 105±30  | 42±5                  | 3.90±0.25         | 3.0±0.4                        |
|                         | 1080HR         | 65±3                      | 105±30                                    | 100±30  | 44±5                  | 3.85±0.25         | 3.2±0.3                        |
|                         | 2313           | 58±3                      | 110±30                                    | 105±30  | 37±5                  | 4.05±0.25         | 4.0±0.4                        |
| KB-6068<br>(Tg180)      | 2116LR         | 50±3                      | 110±30                                    | 105±30  | 30±5                  | 4.30±0.25         | 4.6±0.5                        |
|                         | 2116           | 53±3                      | 110±30                                    | 105±30  | 32±5                  | 4.25±0.25         | 5.0±0.5                        |
|                         | 2116HR         | 55±3                      | 105±30                                    | 100±30  | 34±5                  | 4.20±0.25         | 5.3±0.5                        |
| PP-HF140                | 1506LR         | 43±3                      | 105±30                                    | 100±30  | 22±5                  | 4.60±0.25         | 6.0±0.5                        |
|                         | 1506           | 45±3                      | 105±30                                    | 100±30  | 24±5                  | 4.50±0.25         | 6.4±0.5                        |
|                         | 7628L          | 45.5±3                    | 105±30                                    | 100±30  | 24±5                  | 4.50±0.25         | 7.6±0.6                        |
|                         | 7628           | 44.5±3                    | 110±30                                    | 105±30  | 23±5                  | 4.60±0.25         | 7.6±0.6                        |
|                         | 7268MR         | 46.5±3                    | 105±30                                    | 100±30  | 24±5                  | 4.50±0.25         | 8.2±0.6                        |
|                         | 7628HR         | 49.5±3                    | 100±30                                    | 95±30   | 30±5                  | 4.40±0.25         | 8.9±0.8                        |
|                         | 7630           | 49.5±3                    | 100±30                                    | 95±30   | 30±5                  | 4.30±0.25         | 9.5±1.0                        |
| 7630HR                  | 50.5±3         | 100±30                    | 95±30                                     | 30±5    | 4.30±0.25             | 9.8±1.0           |                                |

备注： PP-HF140 的胶化时间测试温度为： 160°C； 其余为 171°C

## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

### 环氧玻纤布半固化片

| UL Designation<br>UL 型号 | PP style<br>类型 | Resin Content (%)<br>树脂含量 | KB-6065 Gel Time (sec/171°C)<br>胶化时间 | Resin Flow (%)<br>流动度 | DK (1MHZ)<br>介电常数 | Thickness Perply (mil)<br>压合厚度 |
|-------------------------|----------------|---------------------------|--------------------------------------|-----------------------|-------------------|--------------------------------|
| KB-6065<br>(Tg150)      | 106            | 75±3                      | 100±30                               | 40±5                  | 3.87±0.25         | 2.0±0.2                        |
|                         | 1067LD         | 70±3                      | 100±30                               | 40±5                  | 3.89±0.25         | 2.1±0.3                        |
|                         | 1067LD         | 74±3                      | 100±30                               | 40±5                  | 3.85±0.25         | 2.5±0.3                        |
|                         | 1067LD         | 78±3                      | 100±30                               | 40±5                  | 3.80±0.25         | 3.0±0.4                        |
|                         | 1078LD         | 65±3                      | 100±30                               | 40±5                  | 3.92±0.25         | 2.3±0.3                        |
|                         | 1078LD         | 68±3                      | 100±30                               | 40±5                  | 3.85±0.25         | 2.7±0.3                        |
|                         | 1086LD         | 65±3                      | 100±30                               | 40±5                  | 3.95±0.25         | 2.4±0.4                        |
|                         | 1086LD         | 68±3                      | 100±30                               | 40±5                  | 3.87±0.25         | 2.8±0.4                        |
|                         | 1037LD         | 72±3                      | 100±30                               | 40±5                  | 3.86±0.25         | 1.8±0.2                        |
|                         | 1037LD         | 76±3                      | 100±30                               | 50±5                  | 3.80±0.25         | 2.1±0.3                        |
|                         | 1080LR         | 65±3                      | 100±30                               | 40±5                  | 3.95±0.25         | 2.8±0.4                        |
|                         | 1080           | 67±3                      | 100±30                               | 42±5                  | 3.90±0.25         | 3.0±0.4                        |
|                         | 1080HR         | 68±3                      | 100±30                               | 44±5                  | 3.85±0.25         | 3.2±0.3                        |
|                         | 2313           | 61±3                      | 100±30                               | 37±5                  | 4.05±0.25         | 4.0±0.4                        |
|                         | 2116LR         | 53±3                      | 100±30                               | 30±5                  | 4.30±0.25         | 4.3±0.5                        |
|                         | 2116           | 56±3                      | 100±30                               | 32±5                  | 4.25±0.25         | 4.7±0.5                        |
|                         | 2116HR         | 58±3                      | 100±30                               | 34±5                  | 4.20±0.25         | 5.0±0.5                        |
|                         | 1506LR         | 46.5±3                    | 100±30                               | 22±5                  | 4.60±0.25         | 5.8±0.5                        |
|                         | 1506           | 48.5±3                    | 100±30                               | 24±5                  | 4.50±0.25         | 6.2±0.5                        |
|                         | 7628L          | 48.5±3                    | 100±30                               | 24±5                  | 4.50±0.25         | 7.3±0.6                        |
|                         | 7628           | 47.5±3                    | 100±30                               | 23±5                  | 4.60±0.25         | 7.3±0.6                        |
| 7268MR                  | 49±3           | 100±30                    | 24±5                                 | 4.50±0.25             | 7.8±0.6           |                                |
| 7628HR                  | 52±3           | 100±30                    | 30±5                                 | 4.40±0.25             | 8.3±0.8           |                                |
| 7630                    | 52±3           | 100±30                    | 30±5                                 | 4.30±0.25             | 9.0±1.0           |                                |
| 7630HR                  | 52.5±3         | 100±30                    | 30±5                                 | 4.30±0.25             | 9.3±1.0           |                                |

## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

### 环氧玻纤布半固化片

| UL Designation<br>UL 型号 | PP style<br>类型 | R/C<br>树脂含量 | GT(S)胶化时间 |                      | R/F (%)流动度 |                      | V/C (%)  | Thickness<br>Perply (mil)<br>压合厚度 |
|-------------------------|----------------|-------------|-----------|----------------------|------------|----------------------|----------|-----------------------------------|
|                         |                |             | KB-6064F  | KB-6065F<br>KB-6067F | KB-6064F   | KB-6065F<br>KB-6067F |          |                                   |
| KB-6064F<br>(Tg140)     | 106H           | 77±2        | 95±15     | 110±15               | 47±5       | 46±5                 | ≅0.75    | 2.4±0.30                          |
|                         | 106            | 73±2        | 95±15     | 110±15               | 45±5       | 43±5                 | ≅0.75    | 2.0±0.20                          |
|                         | 106L           | 69±2        | 95±15     | 110±15               | 43±5       | 41±5                 | ≅0.75    | 1.7±0.20                          |
|                         | 1067H          | 78±2        | 95±15     | 110±15               | 47±5       | 46±5                 | ≅0.75    | 3.2±0.40                          |
|                         | 1067           | 74±2        | 95±15     | 110±15               | 45±5       | 43±5                 | ≅0.75    | 2.6±0.30                          |
|                         | 1067L          | 70±2        | 95±15     | 110±15               | 43±5       | 41±5                 | ≅0.75    | 2.2±0.30                          |
|                         | 1080HH         | 71±2        | 95±15     | 110±15               | 44±5       | 44±5                 | ≅0.75    | 3.5±0.40                          |
| KB-6065F<br>(Tg150)     | 1080H          | 68±2        | 95±15     | 110±15               | 42±5       | 42±5                 | ≅0.75    | 3.1±0.30                          |
|                         | 1080S          | 65±1        | 95±15     | 110±15               | 40±5       | 38±5                 | ≅0.75    | 2.8±0.30                          |
|                         | 1080           | 63±1        | 95±15     | 110±15               | 38±5       | 36±5                 | ≅0.75    | 2.7±0.30                          |
|                         | 1080U          | 61±1        | 95±15     | 110±15               | 35±5       | 34±5                 | ≅0.75    | 2.5±0.30                          |
| KB-6067F<br>(Tg170)     | 1086HH         | 71±2        | 95±15     | 110±15               | 44±5       | 44±5                 | ≅0.75    | 4.1±0.40                          |
|                         | 1086H          | 69±2        | 95±15     | 110±15               | 42±5       | 42±5                 | ≅0.75    | 3.8±0.30                          |
|                         | 1086           | 67±2        | 95±15     | 110±15               | 40±5       | 40±5                 | ≅0.75    | 3.5±0.30                          |
|                         | 1086U          | 64±2        | 95±15     | 110±15               | 38±5       | 38±5                 | ≅0.75    | 3.2±0.30                          |
|                         | 1086L          | 61±2        | 95±15     | 110±15               | 35±5       | 35±5                 | ≅0.75    | 2.9±0.30                          |
|                         | 2113HH         | 60±1        | 95±15     | 110±15               | 37±5       | 33±5                 | ≅0.75    | 4.1±0.40                          |
|                         | 2113H          | 58±1        | 95±15     | 110±15               | 35±5       | 31±5                 | ≅0.75    | 3.8±0.30                          |
|                         | 2113           | 56±1        | 95±15     | 110±15               | 33±5       | 29±5                 | ≅0.75    | 3.6±0.30                          |
|                         | 2113L          | 54±1        | 95±15     | 110±15               | 31±5       | 27±5                 | ≅0.75    | 3.4±0.30                          |
|                         | 2116HH         | 60±1        | 95±15     | 110±15               | 32±5       | 37±5                 | ≅0.75    | 5.5±0.40                          |
|                         | 2116H          | 58±1        | 95±15     | 110±15               | 30±5       | 35±5                 | ≅0.75    | 5.2±0.30                          |
|                         | 2116           | 56±1        | 95±15     | 110±15               | 28±5       | 33±5                 | ≅0.75    | 4.9±0.30                          |
|                         | 2116U          | 53±1        | 95±15     | 110±15               | 26±5       | 31±5                 | ≅0.75    | 4.5±0.30                          |
| 2116L                   | 50±1           | 95±15       | 110±15    | 24±5                 | 29±5       | ≅0.75                | 4.2±0.30 |                                   |
| 1506H                   | 54±2           | 95±15       | 100±15    | 30±5                 | 27±5       | ≅0.75                | 7.4±0.50 |                                   |
| 1506                    | 50±2           | 95±15       | 100±15    | 26±5                 | 25±5       | ≅0.75                | 6.7±0.40 |                                   |
| 1506L                   | 46±2           | 95±15       | 100±15    | 21±5                 | 23±5       | ≅0.75                | 6.0±0.40 |                                   |
| 7628                    | 48±2           | 75±15       | 90±15     | 26±5                 | 23±5       | ≅0.75                | 8.1±0.50 |                                   |
| 7628                    | 46±2           | 75±15       | 90±15     | 24±5                 | 21±5       | ≅0.75                | 7.7±0.50 |                                   |
| 7628                    | 45±2           | 75±15       | 90±15     | 22±5                 | 19±5       | ≅0.75                | 7.5±0.50 |                                   |
| 7628                    | 43±2           | 75±15       | 90±15     | 20±5                 | 17±5       | ≅0.75                | 7.2±0.50 |                                   |
| 7630                    | 50±2           | 75±15       | 90±15     | 30±5                 | 25±5       | ≅0.75                | 8.9±0.60 |                                   |
| 7630                    | 48±2           | 75±15       | 90±15     | 27±5                 | 23±5       | ≅0.75                | 8.5±0.50 |                                   |
| 7630                    | 46±2           | 75±15       | 90±15     | 23±5                 | 22±5       | ≅0.75                | 8.1±0.50 |                                   |

## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

### 环氧玻纤布半固化片

| UL Designation<br>UL 型号 | PP style<br>类型 | R/C<br>树脂含量 | GT(S)胶化时间 | R/F (%)流动度 | V/C (%)  | Thickness<br>Perply (mil)<br>压合厚度 |
|-------------------------|----------------|-------------|-----------|------------|----------|-----------------------------------|
|                         |                |             | KB-6065GC | KB-6065GC  |          |                                   |
| KB-6065GC<br>(Tg150)    | 106H           | 77±2        | 140±15    | 46±5       | ≅0.75    | 2.4±0.30                          |
|                         | 106            | 73±2        | 140±15    | 43±5       | ≅0.75    | 2.0±0.20                          |
|                         | 106L           | 69±2        | 140±15    | 41±5       | ≅0.75    | 1.7±0.20                          |
|                         | 1067H          | 78±2        | 140±15    | 46±5       | ≅0.75    | 3.0±0.40                          |
|                         | 1067           | 74±2        | 140±15    | 43±5       | ≅0.75    | 2.5±0.30                          |
|                         | 1067L          | 70±2        | 140±15    | 41±5       | ≅0.75    | 2.1±0.30                          |
|                         | 1080HH         | 71±2        | 140±15    | 44±5       | ≅0.75    | 3.4±0.40                          |
|                         | 1080H          | 68±2        | 140±15    | 42±5       | ≅0.75    | 3.1±0.30                          |
|                         | 1080S          | 65±1        | 140±15    | 38±5       | ≅0.75    | 2.8±0.30                          |
|                         | 1080           | 63±1        | 140±15    | 36±5       | ≅0.75    | 2.6±0.30                          |
|                         | 1080U          | 61±1        | 140±15    | 34±5       | ≅0.75    | 2.5±0.30                          |
|                         | 1086HH         | 71±2        | 140±15    | 44±5       | ≅0.75    | 4.0±0.40                          |
|                         | 1086H          | 69±2        | 140±15    | 42±5       | ≅0.75    | 3.7±0.30                          |
|                         | 1086           | 67±2        | 140±15    | 40±5       | ≅0.75    | 3.4±0.30                          |
|                         | 1086U          | 64±2        | 140±15    | 38±5       | ≅0.75    | 3.1±0.30                          |
|                         | 1086L          | 61±2        | 140±15    | 35±5       | ≅0.75    | 2.8±0.30                          |
|                         | 2113HH         | 60±1        | 140±15    | 33±5       | ≅0.75    | 4.0±0.40                          |
|                         | 2113H          | 58±1        | 140±15    | 31±5       | ≅0.75    | 3.7±0.30                          |
|                         | 2113           | 56±1        | 140±15    | 29±5       | ≅0.75    | 3.5±0.30                          |
|                         | 2113L          | 54±1        | 140±15    | 27±5       | ≅0.75    | 3.4±0.30                          |
|                         | 2116HH         | 60±1        | 140±15    | 37±5       | ≅0.75    | 5.3±0.40                          |
|                         | 2116H          | 58±1        | 140±15    | 35±5       | ≅0.75    | 5.0±0.30                          |
|                         | 2116           | 56±1        | 140±15    | 33±5       | ≅0.75    | 4.7±0.30                          |
|                         | 2116U          | 53±1        | 140±15    | 31±5       | ≅0.75    | 4.4±0.30                          |
|                         | 2116L          | 50±1        | 140±15    | 29±5       | ≅0.75    | 4.0±0.30                          |
|                         | 1506H          | 54±2        | 140±15    | 27±5       | ≅0.75    | 7.2±0.50                          |
|                         | 1506           | 50±2        | 140±15    | 25±5       | ≅0.75    | 6.5±0.40                          |
|                         | 1506L          | 46±2        | 140±15    | 23±5       | ≅0.75    | 5.9±0.40                          |
|                         | 7628           | 48±2        | 140±15    | 23±5       | ≅0.75    | 7.9±0.50                          |
|                         | 7628           | 46±2        | 140±15    | 21±5       | ≅0.75    | 7.5±0.50                          |
| 7628                    | 45±2           | 140±15      | 19±5      | ≅0.75      | 7.3±0.50 |                                   |
| 7628                    | 43±2           | 140±15      | 17±5      | ≅0.75      | 7.0±0.50 |                                   |
| 7630                    | 50±2           | 140±15      | 25±5      | ≅0.75      | 8.6±0.60 |                                   |
| 7630                    | 48±2           | 140±15      | 23±5      | ≅0.75      | 8.3±0.50 |                                   |
| 7630                    | 46±2           | 140±15      | 22±5      | ≅0.75      | 7.9±0.50 |                                   |

Remark: ● Other fabric style are available upon request 其它基材布类型可按客户要求提供  
 ● Prepreg characteristics is adjusted to fit different processing condition of customer  
 半固化片指标可根据客户制程要求调整

## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

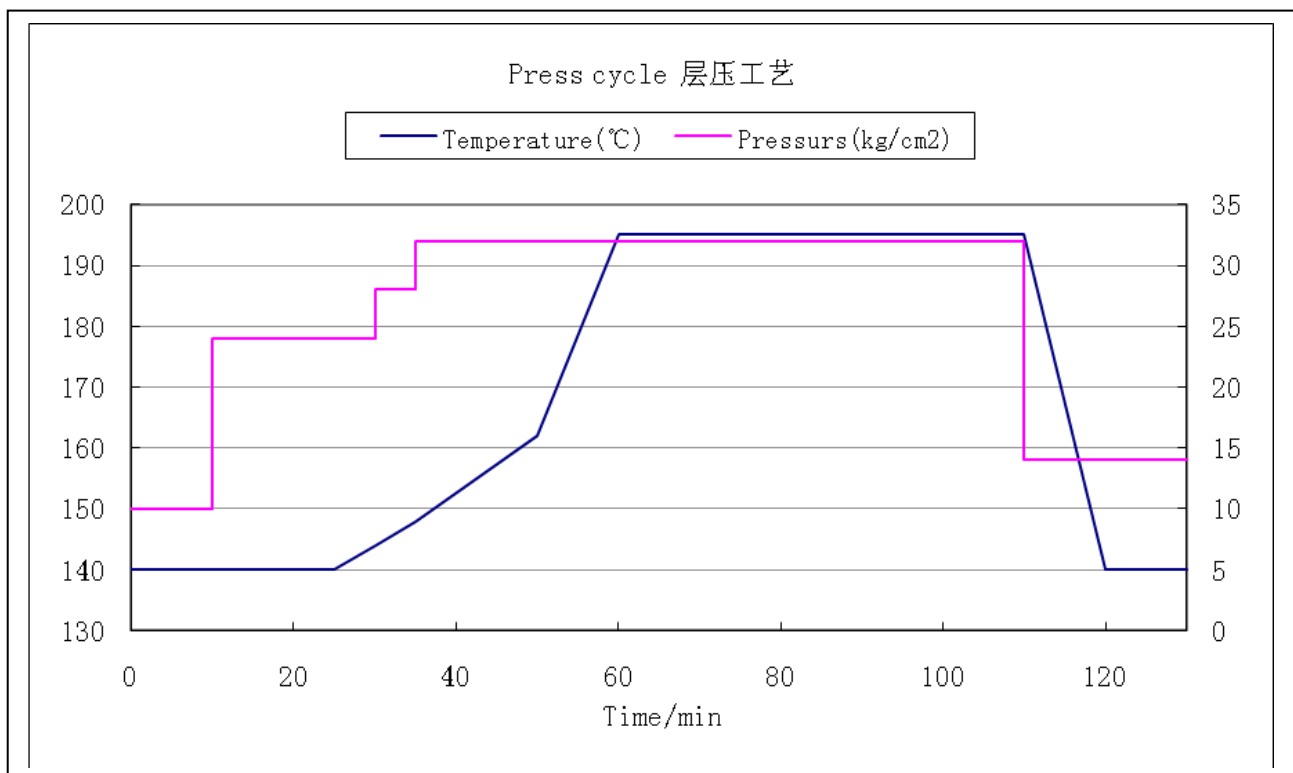
### 环氧玻纤布半固化片

#### 推荐层压工艺条件 Recommended Process

- 热压升温速率(80°C-140°C之间)为1.5-2.0°C/min  
Heat ramp up rate (between 80°C-140°C) should be 1.5-2.0°C/min
- 普通 PP 固化时间应维持不低于 175°C 至少 45min，高 Tg PP 固化时间不低于 180°C 至少 60min  
Curing condition should be maintained at 175°C or above for at least 45minutes for standard PP, and 180°C or above for at least 60 minutes for PP with high Tg
- 固化压力为 25±10kg/cm<sup>2</sup> (真空液压压机)  
Curing pressure should be 25±10kg/cm<sup>2</sup> with vacuum hydraulic press
- 冷却阶段当板温度 120°C 以上时，压力应不低于 10kg/cm<sup>2</sup>  
Pressure for cooling stage should be higher than 10kg/cm<sup>2</sup> when product temperature is higher than 120°C

#### 层压过程温度及压力曲线 - 冷热分开压制体系

Press profile of temperature and pressure during pressing -- For separated Hot/Cold press system



## KB-6050/606X/606XF/6065GC (ANSI: PREPREG)

### 环氧玻纤布半固化片

#### Shelf Life 保存期

- 短期（3个月）存放，保持温度低于 23℃，相对湿度低于 50%  
For short (3 months) storage, keep the temperature at lower than 23℃ and Relative Humidity lower than 50%
- 长期（6个月）存放，保持温度低于 5℃  
For long term (6 months) storage, keep the temperature at lower than 5℃
- 长期保存的半固化片，在使用前须于室温放置 4 小时以上  
After long term storage, it should be normalized at room temperature for at least 4 hours before using
- 须防止紫外光及强光照射  
Avoid UV rays or strong lights

#### Applications 应用领域

- 适用于多层板的压制
- For various multilayer pressing

#### Purchasing Information 采购信息

| PP 类型 style  | 布型 fabric style             | 幅宽 Width              | 长度 length |
|--|-----------------------------|-----------------------|-----------|
| 106、1080LR、1080、1080HR、<br>2116LR、2116、2116HR、#2313  | #106、#1080<br>#2116、#2313   | 49.5 inch<br>(1257mm) | 300m/roll |
| 1506LR、1506、7628、7268MR、<br>7628HR、7628L、7630、7630HR | #1506、#7628<br>#7628L、#7630 |                       | 150m/roll |
| 1037LD、1067LD、1078LD、1086LD                          | #1037、#1067<br>#1078、#1086  |                       | 100m/roll |

Note :LR means : low resin content      LR 表示：低树脂含量  
 MR means : middle resin content      MR 表示：中树脂含量  
 HR means : high resin content      HR 表示：高树脂含量  
 LD means : laser drilling      LD 表示：激光钻孔  
 Other sheet size and thickness could be available upon request.  
 可根据客户要求提供其它尺寸和厚度