

A Low -Expanded Polypropylene Foam Sheet

EFCELL

EFCELL is a low expanded polypropylene foam seat that our company developed by an original technology. It is a new material that can have a lot of excellent unparalleled features, and correspond to a wide-ranging usage.



**EVEN FRIENDLIER
AFTER**

Characteristics
of EFCELL

LIGHT and STRONG

**FINE SURFACE FINISH and
GOOD PRINTING QUALITY**

EASY-TO-PROCESS PROPERTY

RECYCLABLE

CONDUCTIVE or ANTI-STATIC

SANITARY and HARMLESSNESS

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STATIONERY GRADE

"EFCELL" with its smooth and soft to the touch, is used for various stationery.

▶ For example: File, Box file, Album, POP



Standard Type for Stationery

| Part No. | Expansion Ratio (Time) | Thickness (mm) | Size (mm) | |
|----------|------------------------|----------------|-------------|-------------|
| RC2010 | 2 | 1.0 | 980 × 565 | |
| | | | 1350 × 1000 | |
| RC2015 | | 1.5 | 980 × 565 | |
| | | | 1350 × 1000 | |
| RC2020 | | 2.0 | 2.0 | 980 × 565 |
| | | | | 1350 × 1000 |

Properties (RC2010)

| Item | Criteria | Properties | |
|------------------------------|------------|------------|-----|
| Density (kg/m ³) | JIS K 6767 | 500 | |
| Tensile Strength (MPa) | JIS K 6767 | MD | 14 |
| | | TD | 10 |
| Elongation (%) | JIS K 6767 | MD | 30 |
| | | TD | 40 |
| Tear Strength (N/cm) | JIS K 6767 | MD | 400 |
| | | TD | 600 |

| Item | Criteria | Properties | |
|---|------------|------------------------|-----|
| Surface tension (mN/m) | JIS K 6768 | 45 | |
| Bending Modules (MPa) | JIS K 7171 | MD | 400 |
| | | TD | 300 |
| Hardness | JIS K 5401 | 5B 以上 | |
| Surface Conductivity (Ω/cm ²) | JIS K 6911 | 1.0 × 10 ¹³ | |

※ It is actual measurement value, and is not guarantee value.

Standard color and size

○ standard × producing on order

| Thickness (mm) | Size (mm) | R4 (Red) | Y4 (Yellow) | K4 (Gray) | G4 (Green) | B4 (Blue) | B1 (Dark blue) | K7 (Light gray) | W (White) |
|----------------|-------------|----------|-------------|-----------|------------|-----------|----------------|-----------------|-----------|
| 1.0 | 980 × 565 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | × |
| | 1350 × 1000 | × | × | × | × | × | × | × | ○ |
| 1.5 | 980 × 565 | ○ | ○ | ○ | ○ | ○ | × | × | ○ |
| | 1350 × 1000 | × | × | × | × | × | ○ | ○ | × |
| 2.0 | 980 × 565 | ○ | ○ | ○ | ○ | ○ | × | × | ○ |
| | 1350 × 1000 | × | × | × | × | × | ○ | ○ | × |

PACKAGE GRADE

"EFCELL" with its light and easy-to-process property, is used for packing materials.

▶ For example: returnable box, buffer material



Standard Type for Package

| Part No. | Expansion Ratio (Time) | Thickness (mm) | Color | Size (mm) | |
|----------|------------------------|----------------|--------------|-------------|-------------|
| CP2030 | 2 | 3.0 | Blue Natural | 1350 × 2000 | |
| CP3020 | | 2.0 | | | |
| CP3030 | 3 | 3.0 | | | |
| CP3040 | | 4.0 | | | |
| CP3050 | | 5.0 | | | |
| CP4030 | 4 | 3.0 | | | 1000 × 2000 |
| CP4040 | | 4.0 | | | |
| CP4050 | | 5.0 | | | |

Properties (Thickness:3mm)

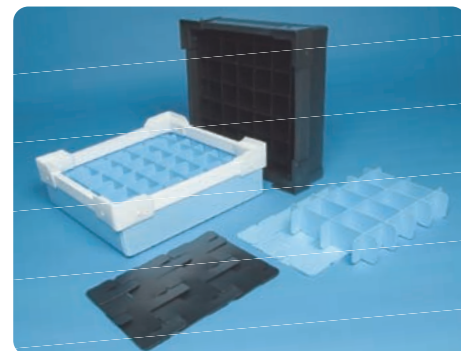
| Item | Criteria | 2 Time | 3 Time | 4 Time |
|------------------------------|------------|--------|--------|--------|
| Density (kg/m ³) | JIS K 6767 | 480 | 330 | 290 |
| Tensile Strength (MPa) | JIS K 6767 | MD | 8 | 6 |
| | | TD | 7 | 4 |
| Elongation (%) | JIS K 6767 | MD | 30 | 30 |
| | | TD | 40 | 40 |
| Tear Strength (N/cm) | JIS K 6767 | MD | 400 | 200 |
| | | TD | 500 | 300 |

| Item | Criteria | 2 Time | 3 Time | 4 Time |
|------------------------------|------------|--------|--------|--------|
| Surface tension (mN/m) | JIS K 6768 | 45 | 45 | 45 |
| Bending Modules (MPa) | JIS K 7171 | MD | 230 | 170 |
| | | TD | 120 | 60 |
| Hardness (Shore A) | JIS K 6253 | 90 | 85 | 75 |
| Rate of Water Absorption (%) | JIS K 6767 | 0.2 | 0.4 | 0.5 |

※ It is actual measurement value, and is not guarantee value.

CONDUCTIVE or ANTISTATIC GRADE

▶ For example: IC Circuit Board container



Standard Type

| | Part No. | Expansion Ratio (Time) | Thickness (mm) | Color | Size (mm) |
|------------|----------|------------------------|----------------|------------|-------------|
| Conductive | D2010 | 2 | 1.0 | K5 (Black) | 1250 × 1000 |
| | D3020 | | 2.0 | | |
| | D3030 | 3 | 3.0 | | |
| Antistatic | E3020 | | 3 | 2.0 | Y2 (Yellow) |
| | | E3030 | | 3.0 | |

Properties

| Item | Criteria | 2Time | 3Time | E 3Time |
|------------------------------|------------|-------|-------|---------|
| Density (kg/m ³) | JIS K 6767 | 500 | 340 | 320 |
| Tensile Strength (MPa) | JIS K 6767 | MD | 10 | 7 |
| | | TD | 8 | 5 |
| Elongation (%) | JIS K 6767 | MD | 30 | 20 |
| | | TD | 40 | 50 |

| Item | Criteria | 2Time | 3Time | E 3Time |
|--------------------------|------------|-----------------------------------|-------|-------------------------------------|
| Tear Strength (N/cm) | JIS K 6767 | MD | 300 | 200 |
| | | TD | 450 | 350 |
| Surface Conductivity (Ω) | JIS K 6911 | 10 ⁶ ~ 10 ⁸ | | 10 ¹⁰ ~ 10 ¹³ |
| Bending Modules (MPa) | JIS K 7171 | MD | 200 | 150 |
| | | TD | 100 | 50 |

※ It is actual measurement value, and is not guarantee value.