

**EX-CEL**

## EX-CEL FF Classic Free Foam PVC Sheets

EX-CEL FF (Free Foam) Classic PVC Sheets come in 10 vibrant colors, plus bright white, and black. Because of their fine cell structure, and smooth, matte surface finish, these premium, extremely versatile, easy-to-fabricate, and very printable PVC sheets are perfect for visual merchandising applications; high quality POP displays and store fixtures; and digital and screen printed indoor PVC signage. They're also a great replacement for wood and are safe for the environment, because they contain no heavy metals. EX-CEL Classic FF sheets can be film-masked, and thicker gauges can be used outdoors.

### Main Features

- Easy-to-fabricate with standard tools
- Lightweight
- Outstanding printability
- Fine cell structure
- Low flammability - Rated UL 94 VO Self Extinguishing
- Non-corrosive
- Non-toxic
- Excellent impact strength
- Safe for the environment (no heavy metals)
- Can be film masked
- Chemical and moisture resistant
- Better insulator than wood

### Fabrication Options

- Rout
- Saw/Cut
- Rivet
- Screw
- Paint
- Print
- Engrave
- Drill
- Photo mount
- Die cut up to 3mm (6mm with heated sheets)
- Heat bend/form

### Applications/Markets

- Advertising signage
- POP Displays
- Furniture
- Exhibit stands and panels
- Models and prototypes
- Boat panels and cabins
- Embossing/Engraving
- Thermoforming
- Retail merchandising
- Replacement for wood
- Digital printing
- Dimensional lettering
- Refrigeration
- Cabinetry
- Vehicles, including ambulances and RV's





# EX-CEL FF Classic Free Foam PVC Sheets

## Sheet Sizes

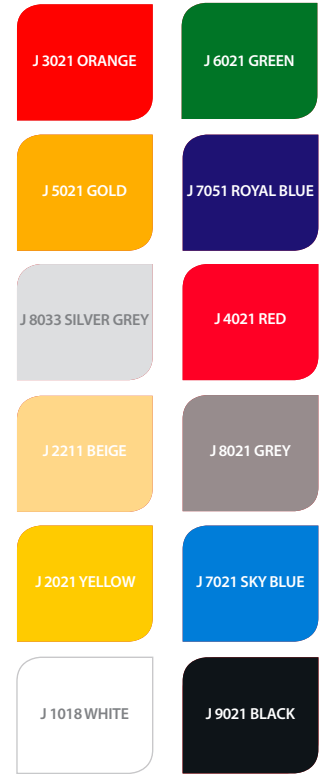
Thickness	Sheet Size	Color
1mm	4' x 8'	White
1mm	4' x 10'	White
2mm	4' x 8'	White
2mm	4' x 10'	White
2mm	5' x 10'	White
2mm	4' x 8'	Black
3mm	4' x 8'	White
3mm	4' x 10'	White
3mm	5' x 10'	White
3mm	4' x 8'	Black/Grey
3mm	4' x 10'	Black
3mm	5' x 10'	Black
3mm	39.37" x 96"	White
3mm	50" x 100"	White
3mm	78.74" x 120"	White
3mm	78.74" x 120"	Black
4mm	4' x 8'	White
5mm	4' x 8'	White
6mm	4' x 8'	White
6mm	4' x 10'	White
6mm	5' x 10'	White
6mm	4' x 8'	Black/Grey
6mm	4' x 10'	Black

## Sheet Sizes

Thickness	Sheet Size	Color
6mm	4' x 10'	Black
6mm	5' x 10'	White
6mm	4' x 8'	Black/Grey
6mm	4' x 10'	Black
6mm	5' x 10'	Black
3mm	4' x 8'	Colors
6mm	4' x 8'	Colors
10mm	4' x 8'	White
10mm	4' x 10'	White
10mm	4' x 8'	Black
12mm	4' x 8'	White
12mm	4' x 10'	White
12mm	4' x 8'	Black
12mm	4' x 10'	Black
16mm	4' x 8'	White
19mm	4' x 8'	White
19mm	4' x 10'	White
19mm	4' x 8'	Black
25mm	4' x 8'	White
25mm	4' x 10'	White
25mm	4' x 8'	Black

SPECIAL SIZES AND CUSTOM COLORS AVAILABLE UPON REQUEST

## EX-CEL FF Classic Colors



Due to printing processes, colors may vary. Visit [www.jainamericas.com](http://www.jainamericas.com) or call to request a Classic FF Swatch Book.

## Technical Values

Property	Test	Unit	Value	
			3-10mm	10-30mm
<b>A] PHYSICAL</b>				
DENSITY	ASTM D 792	g/cc	0.60 - 0.65	.55
HARDNESS	ASTM D 2240	SHORE'D'	≥42	≥50
WATER ABSORPTION	ASTM D570	%	<1.0	<1.0
<b>B] MECHANICAL</b>				
TENSILE STRENGTH*	ASTM D 638	Psi	>1883	>2150
ELONGATION AT BREAK**	ASTM D 638	%	≥15	≥13
E-MODULUS	ASTM D 638	Psi	130000-220000	130000-220000
FLEXURAL STRENGTH	ASTM D 790	Psi	>4600	>4600
IZOD IMPACT STRENGTH	ASTM D 256	Ft lb/in	≥1.7	≥1.7
CHARPY IMPACT STRENGTH	ASTM D 256	Ft lb/in	≥1.7	≥1.7
COMPRESSIVE STRENGTH AT 10% DEFORMATION	ASTM D 695	%	>900	>900
SCREW HOLD (TYPICAL FOR 25MM SHEET)	ASTM D 1761	lbs/inch		>400
<b>C] THERMAL</b>				
VICAT SOFTENING (B/50)	ASTM D 1525	°F	>160	>160
COEFFICIENT OF LINEAR THERMAL EXPANSION	ASTM D 696	°C <sup>-1</sup>	8 X 10 <sup>-5</sup>	8 X 10 <sup>-5</sup>
THERMAL CONDUCTIVITY	ASTM C 177	W/m K	0.05 - 0.07	0.05 - 0.07
HEAT DEFLECTION TEMPERATURE @ 1.8 MPA	ASTM D 648	°F	136	135
BURNING RATE	ASTM D 635	In/min	No burn when flame removed	
<b>D] ELECTRICAL</b>				
SURFACE RESISTIVITY	ASTM D 257	Ω	>1 x 10 <sup>14</sup>	>1 x 10 <sup>14</sup>
VOLUME RESISTIVITY	ASTM D 257	Ω-cm	>1 x 10 <sup>15</sup>	>1 x 10 <sup>15</sup>
DIELECTRIC CONSTANT AT 1 MHZ	ASTM D 150	-	1.7	1.56
DIELECTRIC STRENGTH	ASTM D 149	KV/cm	≥90	≥90
<b>E] FLAMMABILITY</b>				
COUNTRY: UK	BS476; Part 7	-	Class 1	Class 1
COUNTRY: USA	UL 94		94 V-0; 94 5-V	94 V-0; 94 5-V
COUNTRY: FRANCE	NFP 92-501		M1	M1
<b>F] STANDARD DIMENSIONS AND COLOR</b>				
COLOR	White J 1018 & J 1022			
THICKNESS	3-10 and 10-30mm			
WIDTH	1000, 1220 & 1560 mm (2050 mm width on request)			
LENGTH	2000, 2440 & 3050 mm			
<b>G] TOLERANCE ON DIMENSIONS</b>				
LENGTH	-0, +10 mm			
WIDTH	-0, +5 mm			
THICKNESS	+/- (0.1 + 0.05 x S) S = thickness of the sheet			
DEVIATION BETWEEN DIAGONALS	MM ≥6			
WARPAGE ON A FULL SHEET	MM ≥10			

**Thank you** for taking time to learn about Jain Americas and EX-CEL FF Classic. Please contact us today for more information about the many ways we'd like to serve you. Please also visit our website if you'd like to download literature, request samples, view test data and certifications, and learn more about our company, and all four EX-CEL products.



**Jain Americas**

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