




GRAPHICAL™
FOR SIGNAGE THAT'S OUT OF THIS WORLD!

www.graphic-al.com

 MITSUBISHI PLASTICS COMPOSITES AMERICA, INC.

WHAT DO I NEED?

GRAPHIC•AL™ [LT]
LIGHT & TOUGH



GRAPHIC•AL™ [HP]
HIGH PERFORMANCE



GRAPHIC•AL™ [OR]
ORIGINAL



GRAPHIC•AL™ [DP]
DIRECT PRINT

GRAPHICAL™

THE GRAPHIC•ALS HAVE LANDED, AND THE SIGNS ARE SPECTACULAR, WITH THE MOST PERFECT SELECTION OF LIGHT WEIGHT, FLAT PANELS FOR SIGNAGE THIS EARTH HAS EVER SEEN! THE EXCEPTIONAL WORKABILITY AND DURABILITY OF GRAPHIC•AL™ LT OFFERS VIRTUALLY LIMITLESS OPTIONS FOR POP, FREESTANDING DISPLAYS, KIOSKS, INTERIOR AND EXTERIOR SIGNAGE, BILLBOARDS AND MORE. THE TEN-YEAR FINISH WARRANTY BACKING UP GRAPHIC•AL™ HP MAKES IT GREAT FOR CANOPIES, FASCIA, SIGNAGE AND MORE. LIGHTWEIGHT AND DURABLE, GRAPHIC•AL™ HP IS ALSO A FABRICATOR'S DREAM. GRAPHIC•AL™ OR OFFERS EXCELLENT FLATNESS AND SUPERIOR SMOOTHNESS WITH THE RIGIDITY OF AN ALUMINUM COMPOSITE IN A SUPER LIGHT WEIGHT WITH THINNER ALUMINUM SKINS (0.005" THICK) AND A FOAMED PLASTIC CORE. EASILY CUT WITH A SAW, SUBSTRATE CUTTER OR ROUTER THIS UNIQUE MATERIAL DELIVERS STELLAR PERFORMANCE OVER A WIDE RANGE OF APPLICATIONS. GRAPHIC•AL™ DP DELIVERS THE SAME IMPRESSIVE QUALITIES IN A SUBSTRATE IDEAL FOR FLATBED PRINTERS. DURABILITY AND PERFORMANCE ARE CRUCIAL FOR ALL TYPES OF SIGNAGE, AND THE FACT THAT GRAPHIC•AL™ IS BY MITSUBISHI PLASTICS, CERTAINLY DOESN'T GO UNNOTICED.





GRAPHICAL **LT**
LIGHT & TOUGH



APPLICATIONS

- INDOOR SIGNAGE AND DISPLAYS
- OUTDOOR SIGNAGE AND DISPLAYS
- ALTERNATIVE OF COATED ALUMINUM SHEETS
- PAINTED AND BRUSHED COLORS AVAILABLE

GRAPHIC-AL™ LT OFFERS EXCEPTIONAL WORKABILITY, DURABILITY AND VIRTUALLY UNLIMITED OPTIONS TO DESIGNERS AND FABRICATORS OF POP, FREE-STANDING DISPLAYS, KIOSKS, INTERIOR AND EXTERIOR SIGNAGE, BILLBOARDS AND MORE. IT IS A VERSATILE AND REVERSIBLE ALUMINUM COMPOSITE MATERIAL THAT OFFERS AN EXCELLENT FLATNESS, HIGH RIGIDITY AND LIGHTNESS OF WEIGHT IN A VARIETY OF COLORS. GRAPHIC-AL™ LT IS ALSO AVAILABLE IN A BRUSHED METAL FINISH.



GRAPHICAL HP
HIGH PERFORMANCE

HP



APPLICATIONS

- OUTDOOR SIGNAGE FOR CORPORATE IDENTITY APPLICATIONS AND RETAIL SHOPS, INCLUDING CANOPIES, FASCIA SIGNS, COLUMNS AND ACCENTS.

GRAPHIC-AL™ HP IS A FLAT AND RIGID ALUMINUM COMPOSITE MATERIAL (ACM) COATED WITH A HIGH PERFORMANCE POLYESTER PAINT. COMBINED WITH THIS HIGH PERFORMANCE POLYESTER COATING, GRAPHIC-AL™ HP IS AN IDEAL ACM FOR OUTDOOR CANOPIES AND FASCIA SIGNS FOR CORPORATE IDENTITY APPLICATIONS AND RETAIL SHOPS. GRAPHIC-AL™ HP HAS A SPECIAL 10-YEAR COATING WARRANTY.



GRAPHICAL OR
ORIGINAL

OR



APPLICATIONS

- INDOOR AND OUTDOOR SIGNS
- INDOOR AND OUTDOOR DISPLAYS
- ALTERNATIVE OF COATED ALUMINUM SHEET

GRAPHIC-AL™ OR HAS THE RIGIDITY OF AN ALUMINUM COMPOSITE MATERIAL, IN A SUPER LIGHT WEIGHT WITH THINNER ALUMINUM SKINS (0.005") AND A FOAMED PLASTIC CORE. IT OFFERS EXCELLENT FLATNESS AND SUPERIOR SMOOTHNESS. EASILY CUT WITH A SAW, SUBSTRATE CUTTER OR ROUTER, THIS UNIQUE MATERIAL DELIVERS STELLAR PERFORMANCE OVER A WIDE RANGE OF APPLICATIONS.



GRAPHICAL DP
DIRECT PRINT

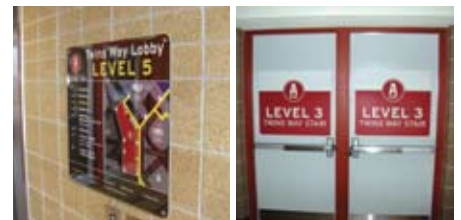
DP



APPLICATIONS

- PERFECT FOR DIRECT PRINTING WITH UV INK
- INDOOR GRAPHIC SIGNS AND DISPLAYS
- OUTDOOR GRAPHIC SIGNS AND DISPLAYS

GRAPHIC-AL™ DP OFFERS THE SAME IMPRESSIVE QUALITIES AS GRAPHIC-AL™ OR, BUT DELIVERS THE ADDED BENEFIT OF A SUBSTRATE SUITABLE FOR FLATBED PRINTERS AND UV CURABLE INK. YOU'LL GET OUT-OF-THIS-WORLD RESULTS WITH GRAPHIC-AL™ DP.





PROCESSING METHOD

CUTTING/SAW **LT HP OR DP**

ALL GRAPHIC-AL™ PRODUCTS CAN BE EASILY CUT USING STANDARD WOODWORKING SAWS (I.E. CIRCULAR HAND SAW OR PANEL SAW). A CARBIDE TIP BLADE MADE FOR ALUMINUM AND PLASTIC IS THE MOST SUITABLE.

CUTTING/SUBSTRATE CUTTER **LT HP OR DP**

ALL GRAPHIC-AL™ PRODUCTS CAN ALSO BE CUT USING SUBSTRATE CUTTERS SUCH AS FSC (FLETCHER SUBSTRATE CUTTER) EQUIPPED WITH THE ALUMINUM COMPOSITE TOOL AND FOSTER'S KEENCUT STEELTRAK EQUIPPED WITH THE TWIN WHEEL CUTTING HEAD.

CONTOUR CUTTING **LT HP OR DP**

FOR CONTOUR CUTTING, USING A CNC ROUTER CAN PRODUCE A CLEAN CUT WITH HIGH PRECISION. AN 1/8"–1/16" STRAIGHT BIT IS SUITABLE. A FRET SAW, HAND ROUTER OR HAND JIG SAW CAN ALSO BE USED FOR CONTOUR CUTTING.

FOLDING AFTER GROOVING **LT HP**

TO FOLD GRAPHIC-AL™ LT AND HP, MAKE A GROOVE IN THE BACKSIDE OF THE MATERIAL.

THEN FOLD WITH A FOLDING JIG. GRAPHIC-AL™ OR AND DP ARE NOT SUITABLE FOR FOLDING AFTER V-GROOVING BECAUSE THE SKINS ARE TOO THIN FOR FOLDING PROPERLY.

CURVING **LT HP**

GRAPHIC-AL™ LT AND HP CAN BE CURVED BY MEANS OF ROLLER BENDERS AND PRESS BRAKES. GRAPHIC-AL™ OR AND DP ARE NOT SUITABLE FOR CURVING WITH PRESS BRAKES OR ROLLER BENDERS, BECAUSE THE FOAMED CORE DOES NOT ACCOMMODATE THE PRESSURE.

JOINING **LT HP OR DP**

WHEN THREADED FASTENERS OR RIVETS ARE USED FOR JOINING GRAPHIC-AL™, USE THOSE MADE OF ALUMINUM OR STAINLESS STEEL. PROPER CONSIDERATION SHOULD BE GIVEN TO THE THERMAL EXPANSION CHARACTERISTICS.

ADHESION/ADHESIVE, SEALANT AND DOUBLE-FACED TAPE

VARIOUS TYPES OF ADHESIVES CAN BE USED, INCLUDING EPOXY (ARALDITE), CHLOROPRENE (CONTACT CEMENT), ETC. BUT SOME ADHESIVES MAY CORRODE ALUMINUM AND MAY NOT WORK WELL WITH GRAPHIC-AL™ PRODUCTS.

FOR EXAMPLE, VINYL ACETATE WHICH IS WIDELY USED FOR TIMBER AND STYRENE FOAM CORRODES ALUMINUM AND IS NOT SUITABLE. ADHERING GRAPHIC-AL™ TO A DISSIMILAR MATERIAL MAY CAUSE A DEFLECTION ON THE PANEL DUE TO THERMAL EXPANSION. SOME ADHESIVES MAY CAUSE A DISTORTION ON THE PANEL DUE TO HARDENING. CHECK THESE POTENTIAL PROBLEMS BY PRE-TESTING BEFORE USE. VARIOUS TYPES OF SEALANT CAN BE USED, INCLUDING SILICONE, MODIFIED SILICONE, POLYSULFIDE AND POLYURETHANE. DOUBLE-FACED TAPE CAN ALSO BE USED FOR GRAPHIC-AL™ OR OR DP.

SCREEN PRINTING

SCREEN PRINTING CAN BE DONE WITH AN EPOXY BASE OR URETHANE BASE TWO-PART TYPE INK. AFTER DRYING AT 175°F FOR 30 MIN AND CURING AT ROOM TEMPERATURE FOR 24 HRS, THESE INKS WILL SHOW A NORMAL ADHESION. KEEP THE TEMPERATURE ON OR UNDER 175°F AND HOLD THE GRAPHIC-AL™ PANEL HORIZONTALLY.

UV DIRECT PRINTING

BASICALLY ALL GRAPHIC-AL™ PRODUCTS ARE COMPATIBLE WITH UV DIRECT PRINTING. BUT OUR TESTS WITH GRAPHIC-AL™ OR, LT AND HP SHOW THAT SOME PRINTERS' INK ADHESION DOES NOT WORK AS WELL AS OTHERS'. CHECK THE INK ADHESION BY PRE-TESTING. FOR PERFECT INK ADHESION, WE RECOMMEND GRAPHIC-AL™ DP.

INSTRUCTION FOR USE

PROTECTIVE FILM

ALL GRAPHIC-AL™ PRODUCTS COME WITH FACTORY APPLIED TRANSPARENT PROTECTIVE FILMS. GRAPHIC-AL™ OR AND LT HAVE FILMS ON BOTH SIDES. GRAPHIC-AL™ DP AND HP ONLY HAVE IT ON THE FRONT SIDE. REMOVE THEM AFTER FABRICATION.

COATING DIRECTION

IN METALLIC AND BRUSHED COLORS, A SLIGHT COLOR DIFFERENCE WILL BE NOTICEABLE BETWEEN THE PANELS ARRANGED IN DIFFERENT DIRECTIONS. ARRANGE PANELS IN THE SAME DIRECTION.

PREVENTION FROM EDGE CORROSION

IN OUTDOOR USE OR WHEN USING THE PANEL IN A HUMID ENVIRONMENT, DESIGN THE PANEL TO ALLOW ITS EDGE TO BE KEPT DRY, IN ORDER TO PREVENT EDGE CORROSION AND ENSURE LONG-TERM DURABILITY. IF THE EDGES WILL BE EXPOSED TO STAGNANT WATER, MAKE A DRAIN HOLE TO REMOVE THE WATER.



NOTE: UV DIRECT PRINT EXAMPLE, PRODUCED BY GANDINNOVATIONS' JETTI UV FLATBED PRINTER

WHAT DO I NEED?

GRAPHICAL[™] LT

LIGHT & TOUGH

- INDOOR & OUTDOOR SIGNAGE AND DISPLAYS
- ALTERNATIVE OF COATED ALUMINUM SHEET

GRAPHICAL[™] HP

HIGH PERFORMANCE

- OUTDOOR CANOPY AND FASCIA SIGNS FOR CORPORATE IDENTITY AND RETAIL SHOPS

GRAPHICAL[™] OR

ORIGINAL

- INDOOR & OUTDOOR SIGNAGE AND DISPLAYS
- ALTERNATIVE OF COATED ALUMINUM SHEET

GRAPHICAL[™] DP

DIRECT PRINT

- PERFECT FOR DIRECT PRINTING WITH UV INK
- INDOOR & OUTDOOR GRAPHIC SIGNS AND DISPLAYS

PRODUCT OUTLINE*

TOTAL THICKNESS	2,3,4MM	3MM	3MM	3MM
COMPOSITION:				
- ALUMINUM THICKNESS	0.010"	0.010"	0.005"	0.005"
- CORE	POLYETHYLENE	POLYETHYLENE	FOAMED POLYETHYLENE	FOAMED POLYETHYLENE
PANEL WEIGHT	2MM 0.57PSF 3MM 0.76PSF 4MM 0.95PSF	3MM 0.76PSF	3MM 0.51PSF	3MM 0.51PSF
PANEL SIZE	48" X 96"	51" X 122"	48" X 96"	48" X 96"
FINISHES	WHITE/WHITE	WHITE BLACK RED	WHITE/WHITE	WHITE
FLAMMABILITY CHARACTERISTICS	UL 94 V-0 AND UL 879 APPROVED CLASS 1 OR CLASS A FIRE RATED		NOT APPLICABLE	

*NOTE: FOR DETAILS, SEE "PRODUCT INFORMATION" FOR EACH PRODUCT

FABRICATION OUTLINE*

CUTTING/SAW	●	●	●	●
CUTTING/SUBSTRATE CUTTER	●	●	●	●
CONTOUR CUTTING	●	●	●	●
FOLDING AFTER GROOVING	●	●		
CURVING/BENDER	●	●		
SCREEN PRINTING	●	●	●	●
UV DIRECT PRINTING	SUGGEST PRE-TESTING	SUGGEST PRE-TESTING	SUGGEST PRE-TESTING	●

*NOTE: FOR DETAILS, SEE "FABRICATION NOTE" FOR EACH PRODUCT

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