Working with Komatex®

Machining

Komatex® sheets can be easily and quickly worked with the standard tools used to process wood and metal. To prevent breaking and splitting, the tools must be sharp. Generally, you should use a high cutting speed and slow, continuous forward feed. Normally, it is not necessary to cool the cutting tools, but in special cases, compressed air is sufficient. Deep notches and sharp edges can cause premature breaking of the material if too much weight is placed on the affected area.

Forming

Deep-drawing and blowing of Komatex sheets is possible only to a limited extent. This is also true of bending and folding. The sheets can be deep-drawn, bent and, by warming, beveled under certain conditions. Deformations under thermal impact are possible to a limited degree (e.g., bending, beveling with notch, etc.)

Welding

Komatex can be welded by normal procedures, such as hot gas, heated tool, bending and welding, friction, etc., using common equipment. Before welding, the part of the sheet to be welded must be properly cleaned with a cleaning agent or by machining. After welding, finishing may be necessary. Komatex should be worked very carefully to ensure that the foam structure does not collapse.

Bonding

Komatex will accept most adhesives for rigid PVC. The sheet surface must be clean, dry and free of oil or grease. When choosing an adhesive, consider the strength required, the temperature the sheet will be exposed to, cure time and environmental safety.

When bonding Komatex to itself, the same solvent-type adhesives used for rigid PVC will provide excellent results. We recommend Lord and IPS Weld-on products for most applications in which bonding to Komacel or another substrate is required. As always, we suggest a test piece prior to full production.

Painting and Screen Printing

Komatex has a superior surface for screen printing. This method will give outstanding results with a crisp, clear, colorful finish. Paints also can be used to achieve similar results. No primers are required when using either method. UV, solvent-based and acrylic inks and paints can be used with Komatex to gain great results. To get proper adhesion, it is important that the sheets are clean and free of all dust, oils and grease before printing or painting. Isopropyl alcohol removes most foreign objects. Please consult your local distributor or ink manufacturer to find the best inks and paints to use with Komatex.

Nazdar Ink Recommendations
9700, S2, PP, GV, 3200 and 3600 series.

Sericol Ink Recommendations

Solvent Base:		UV Inks:	
Plastijet XG	Polyplast PY	Fascure	Plastical
Plastec	Polyplast Matte (flat)	Uviflex	Mr Matte (flat)
Tech Mark	GVYL	UVRP	Gloss Poly

Inks are listed in order of preference.

Laminating

Laminating Komatex to other material should present no problems. Common resin-based adhesives or mastics can be used. For best results, Komatex must be clean and free of dust and dirt. Check with the adhesive manufacturer to be sure it will work with Komatex PVC.

Fixing and Storage

With a coefficient of linear thermal expansion a = 0.08 mm/m°C, Komatex sheets vary more in length than wood or metal. When you install screen-printed advertising boards or fix curtain walling and cladding, possible sheet expansion has to be taken into account. The appropriate fixing method depends on the application.

Always store Komatex sheets on a dry and even surface in heated rooms at 15 – 20°C (59 – 68°F). Sheets inside the packing must not be exposed to weathering and solar radiation.

Tolerances

Thickness (s)
±(0.1 mm + 0.05 x s)
Width
0 / + 0.25 mm (0.01 in.)
Length
0 / + 10 mm (0.39 in.)
Rectangularity
≤2.0 mm/m (0.08 in.)
Linearity
max. 1.5 mm/m (0.06 in./yd.)
Evenness
max 1.5 mm/m (0.06 in./yd.)
Colors
14

Permissible color difference according to DIN standard 6174,
color white, ≥ 1,2 CIELAB units.

Permissible color difference according to DIN standard 6174, colored, ≥ 2,5 CIELAB units.