A Rigid substrate recommendations

The rigid substrate types described in this appendix are compatible with your printer.

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Recommended print modes (introduction)

The recommended print modes in this chapter include the print modes that are standard and recommended by HP for a substrate family. This recommendation is based on HP's internal testing and, in most cases, provides a good starting point for printing on substrates within a specific substrate family.

Although HP tests are performed on an extensive set of substrates, there is no guarantee that these settings are suitable for every substrate. Additional, optimized print modes for specific substrates can be created by cloning and modifying an existing one. See Add a substrate preset on page 64 for more information.

Use Sensitive Mode with heat-sensitive substrates

Some substrates, due to their chemical composition or thickness, can be especially sensitive to the heat produced by the curing module. Examples include PVC foams, and solid plastics thinner than 3 mm.

After such a substrate has been loaded into the printer, the Internal Print Server notifies you, within the substrate widget, that the substrate is potentially sensitive, and that you should set the heater to work in Sensitive Mode. Not all print modes can be used in this mode; check that the print mode for the job is supported in Sensitive Mode before printing.

When you tap **Print**, if necessary the printer will give you a final reminder to set Sensitive Mode and choose an appropriate print mode; but you can choose to ignore the reminder.

NOTE: If you are in an area (such as California) that regulates VOC cleaning and maintenance fluids, instead of isopropyl alcohol use a VOC-certified cleaner such as a properly diluted Simple Green All-Purpose Cleaner.

Predefined substrate settings

Substrate type	Feed method	Weight	Detectable by printer	Use rollers	Conductive	Vacuum fan level	Examples
Aluminum composite	Sheet	Light	No	Yes	Yes	Medium	Alumacore, Alumalite, Dibond, Graphic-AL, Omega-Bond
Clear sheet	Sheet	Light	No	Yes	No	Medium	Acrylic, Plexiglas, Glass, Polycarbonate
Compressed cardboard or cardstock	Sheet	Light	Yes	Yes	No	High	Tag board, Poster board
Corrugated cardboard	Sheet	Light	Yes	Yes	No	High	Cardboard, Corrugated fiberboard
Corrugated plastic	Sheet	Light	Yes	Yes	No	Medium	Coroplast, Correx, Corflute, Polypropylene
Foam board	Sheet	Light	Yes	Yes	No	High	Fome Core, Mighty Core
Foam PVC	Sheet	Light	Yes	Yes	No	Medium	Sintra, Komatex, Celtec, Forex
Magnetic	Sheet	Light	Yes	Yes	Yes	Medium	Promag
Plywood	Sheet	Heavy	Yes	Yes	No	Off	MDO, MDF
Polystyrene	Sheet	Light	Yes	Yes	No	Medium	Styrene
Polystyrene foam board	Sheet	Light	Yes	Yes	No	Medium	Gatorplast, Ultraboard

Acrylic sheet (PMMA)

Brand name examples: Plexiglas, Acrylite, Optix, Crylon, Crylux, Perspex, Lucite, Marcryl, Altuglas

Preparation

- Ensure that the sheet is flat. Sheets that are deformed along either axis (left to right, or front to back) can cause the printhead to strike the substrate.

- Peel the protective film off one side, leaving the other side protected until finishing or installation of the finished graphic.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Use clean cotton gloves to avoid fingerprints.

- Handle samples with care. Scratches on the substrate before printing will be visible after printing.

- Cast acrylic substrates may require extra care when printing, because of the way they are made. When loading a sheet, pay attention to thickness differences within the same sheet, which may be up to ±10%. HP recommends measuring the thickness at different points and manually entering the highest measured thickness value.

Printing

- These materials are heavy in large sizes. Do not exceed 60 kg (132 lb) sheets.

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use an available generic preset. For frontlit applications, load the substrate as **Generic Solid Plastic**. For backlit applications, load the substrate as **Generic Backlit Solid Plastic**.

- Both frontlit and backlit acrylics have generic underflood, overflood, and spot print modes available for white printing.

Recommended print modes

📝 IMPORTANT: HP recommends using Sensitive Mode when the substrate is less than 3 mm (0.1 in) thick. See Use Sensitive Mode with heat-sensitive substrates on page 269.

📝 NOTE: Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Indoor signage** print mode for applications that will be viewed from short distances. For increased saturation, use **High quality**.

	Color-only print modes (no white)				
Generic presets	Fast	Outdoor signage	Indoor signage	High quality	Heat-sensitive
Generic Solid Plastic	N/A	N/A	6p-100%	12p-120%	12p-110%
Generic Backlit Solid Plastic	N/A	N/A	N/A	14p-200%	18p-180%

- To print images that require white ink, the following print modes are available:

–   **Overflood:** Use this white mode in applications that are printed on the second surface and are viewed through the substrate. In this mode a color layer is printed first and, afterwards, a white ink layer is printed on top. This mode is generally used on clear substrates and requires flipping the image in the RIP or image-editing software.

–   **Underflood:** Use this white mode in applications that use colored substrates and require realistic colors. In this mode, a white ink layer is printed first and then a color layer is put on top of it.

–   **Spot:** This mode is normally used on both transparent and colored substrates when white ink is not mixed with other colors in the same area.

All the generic white print modes use the same amount of colored ink. The white print modes **W100**, **W160**, and **W260** differ only in the amount of white ink used.

Select **White OF W100** when white opacity requirements are normal. For increased white opacity, select **White OF W160**. For maximum white opacity, select **White OF W260**.

| Generic presets | Color + white print modes | | | | | | | | | |
| | Underflood white modes | | | Overflood white modes | | | | Spot white modes | | |
	White UF W100	White UF W160	White UF W260	White OF W100	White OF W100 heat-sensitive	White OF W160	White OF W260	White SP W100	White SP W160	White SP W260
Generic Solid Plastic	N/A	N/A	33p-120%	16p-120%	24p-110%	24p-120%	N/A	N/A	11p-110%	18p-120%
Generic Backlit Solid Plastic	N/A	N/A	N/A	26p-200%	N/A	N/A	N/A	N/A	N/A	N/A

Output handling

● Use caution when loading or lifting sheets off the table, as the substrate and ink can be easily scratched.

● When stacking samples, HP recommends placing some material between the acrylic sheets to protect them against scratching.

● Use clean cotton gloves to avoid fingerprints.

● HP particularly recommends using gloves when handling freshly-printed sheets, as they will be hot (though not hot enough to burn your hands).

Known incompatibility

● Extruded acrylic sheets that are thin and wide have a tendency to deform, and have a high risk of causing printhead crashes. Use sheets with a maximum width of 1.5 m (59 in) when printing on extruded acrylic substrates up to 3 mm (0.12 in) in thickness.

Possible solutions: Pre-cut samples at 1.5 m (59 in), use cast acrylic or polycarbonate sheets instead of extruded ones when printing on thin sheets, or use thicker sheets: 5 mm (0.20 in).

Aluminum composite panel (ACP)

Brand name examples: Alumacore, Alumalite, Dibond, Graphic-AL, Omega-Bond

Preparation

- Peel the protective film off one side, leaving the other side protected until finishing or installation of the finished graphic.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Ensure that the substrate is flat and there are no damaged corners, edges, or ends. If the edges are bent, they should be flattened before printing. A head height greater than the standard 1.8 mm (0.07 in) may be necessary to avoid damaged or bowed edges that will interfere with the path of the carriage.

- Use clean cotton gloves to avoid fingerprints and avoid the risk of cutting yourself with the edges of the sheet.

- Handle samples with care. Scratches on the substrate before printing will be visible after printing.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic Aluminium Composite Panel** preset.

- Aluminium composite panels have generic underflood and spot print modes available for white printing.

Recommended print modes

> **NOTE:** Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Indoor signage** print mode for applications that will be viewed from short distances. For increased saturation, use **High quality**.

Generic presets	Color-only print modes (no white)			
	Fast	Outdoor signage	Indoor signage	High quality
Generic Aluminium Composite Panel	N/A	N/A	6p-100%	12p-120%

- To print images that require white ink, the following print modes are available:

  - **Underflood:** Use this white mode on substrates such as brushed or colored aluminium when you need realistic colors. In this mode, a white ink layer is printed first and then a color layer is put on top of it.

  - **Spot:** This mode is normally used on substrates such as brushed or colored aluminium when white ink is not mixed with other colors in the same area.

Generic presets	Color + white print modes								
	Underflood white modes			Overflood white modes			Spot white modes		
	White UF W100	White UF W160	White UF W260	White OF W100	White OF W160	White OF W260	White SP W100	White SP W160	White SP W260
Generic Aluminium Composite Panel	N/A	N/A	33p-120%	N/A	N/A	N/A	N/A	N/A	18p-120%

Output handling

- Use caution when loading or lifting sheets off the table, as the substrate and ink can be easily scratched.

- HP recommends using gloves when handling freshly-printed sheets, as they will be hot (though not hot enough to burn your hands).

Compressed cardboard or cardstock

Also known as cover stock, paperboard, pasteboard, and tag board

Preparation

- Store substrates flat, in a clean environment with the same or similar temperature and humidity as in the printer room. Changes in temperature or humidity will cause the material to warp and may cause printhead crashes.

- Some coated sheets may interact with the ink, yielding poor print quality. Test coated materials for compatibility before purchasing significant quantities.

- Clean with a lint-free cloth to remove any dust and debris.

- Use gloves when handling the substrate to avoid transferring fingerprints and oils to the print surface.

- The substrate can bend and crease easily. Watch for edges that may strike the carriage.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic Compressed Cardboard** preset.

- Some cardboard substrates, especially uncoated ones, are porous and may absorb the ink, giving a washed-out appearance. Use the Add a substrate preset on page 64 process to increase the amount of ink or to create an underflood white printmode to boost colour saturation.

Recommended print modes

📝 NOTE: Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Outdoor signage** print mode for applications that will be viewed from medium to long distances. For increased saturation, use **Indoor signage** or **High quality**.

Generic presets	Color-only print modes (no white)			
	Fast	Outdoor signage	Indoor signage	High quality
Generic Compressed Cardboard	N/A	4p-80%	6p-100%	8p-110%

- There are no white generic presets for compressed cardboards. If white ink is needed (for colored or uncoated cardboards), see Add a substrate preset on page 64.

Output handling

- Use gloves to avoid transferring fingerprints and oils to the print surface.

- In some cases, particularly thin samples—thinner than 1.5 mm (0.06 in)—may warp during the printing process. Allow samples to rest for 10–15 min after printing to recover their initial shape.

Corrugated cardboard

Also known as corrugated fiberboard and box board

Preparation

- Store substrates flat, in a clean environment with the same or similar temperature and humidity as in the printer room. Recommended storage conditions: 19–23°C (66–73°F), 55–65% RH. Changes in temperature or humidity will cause the material to warp.

- After taking boards from the pallet, cover the pallet with its original packaging and, if possible, strap it again.

- The substrate can bend and crease easily. Watch for edges that may strike the carriage.

- Concave bent boards are much preferable to convex ones. Ordering boards with the same liner on both sides allows you to choose the side that is more suitable for holding.

- For some very bent samples, tape and edge holders may be needed.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic Corrugated Cardboard** preset.

- Cardboard substrates, especially uncoated ones, are porous and may absorb the ink, giving a washed-out appearance. Use the Add a substrate preset on page 64 process to increase the amount of ink or to create an underflood white printmode to boost colour saturation.

Recommended print modes

📝 NOTE: Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Outdoor signage** print mode for applications that will be viewed from a distance of at least 3 m (10 ft). For increased saturation, use **Indoor signage** or **High quality**.

	Color-only print modes (no white)			
Generic presets	Fast	Outdoor signage	Indoor signage	High quality
Generic Corrugated Cardboard	N/A	4p-80%	6p-100%	8p-110%

- There are no white generic presets for corrugated cardboards. If white ink is needed (for colored or uncoated cardboards), see Add a substrate preset on page 64.

Output handling

- In some cases, samples may warp during the printing process. Allow samples to rest for 10–15 min after printing to recover their initial shape.

Known incompatibility

- Very bent samples may not be printable.

Corrugated plastic

Also known as corrugated or fluted polypropylene

Brand name examples: Corflute, Coroplast, Correx, Akyplac, Akylite, Cor-X

Preparation

- The quality of corrugated polypropylene can vary greatly. A corona treatment is generally applied when manufactured to increase the surface tension for better ink adhesion. This corona treatment will diminish over time. Substrate that has been shipped long distances or stored for an extended period of time will have more problems with ink adhesion.

- This substrate tends to hold static charge. Avoid sliding it from the stack or carrying it across carpeted surfaces.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Substrates are often supplied in non-rectangular form, so trimming them to rectangular may be necessary for some applications, such as edge-to-edge printing. Make sure all edges are cut clean and are free from burrs and/or excess substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic Plastic Corrugated** preset.

- Faster print speeds can be obtained without noticeable banding by feeding the substrate with the flutes parallel to the printhead carriage motion.

Recommended print modes

📝 **NOTE:** Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Fast** print mode for applications that will be viewed from a distance of at least 3 m (10 ft) and do not need saturated colors. For increased color saturation, use **Outdoor signage** or **Indoor signage**.

	Color-only print modes (no white)			
Generic presets	Fast	Outdoor signage	Indoor signage	High quality
Generic Plastic Corrugated	3p-70%	4p-90%	6p-110%	N/A

- There are no white generic presets for corrugated plastics. If white ink is needed, see Add a substrate preset on page 64.

Output handling

- Although ink adhesion may improve over 24 hours, latex inks create a thin and flexible layer that do not allow ink to self-delaminate from the surface over time.

- In some cases, samples may warp during the printing process. Allow samples to rest for 10–15 min after printing to recover their initial shape. If the original shape cannot be recovered, decreasing curing temperature may help.

Foam board

Brand name examples: Fome-Cor, Kapa, Gator, MightyCore, Airplac, Gatorplast, Kapa plast, Ultraboard, Infinity

Preparation

- Store substrates flat, in a clean environment with the same or similar temperature and humidity as in the printer room. Changes in temperature or humidity will cause the substrate to warp.

- Foam boards with plastic liners tend to hold static charge. Avoid sliding the substrate from the stack or carrying it across carpeted surfaces. Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- For plastic liner foam boards, if an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- The substrate is susceptible to dents and damage. Watch for corners and edges that may strike the carriage.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic Paper Foamboard** preset for substrates with a cellulosic liner, or the **Generic Plastic Foamboard** preset for substrates with a plastic liner.

- These substrates are heat-sensitive, and HP does not recommend exceeding a 70°C (158°F) curing temperature to avoid deformations, liner delamination, and substrate thickness increase.

Recommended print modes

NOTE: Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Outdoor signage** print mode for applications that will be viewed from a distance of at least 3 m (10 ft) and do not need saturated colors. For increased color saturation, use **Indoor signage** or **High quality**.

	Color-only print modes (no white)			
Generic presets	Fast	Outdoor signage	Indoor signage	High quality
Generic Foam Board	N/A	4p-80%	6p-100%	8p-110%

- There are no white generic presets for foam boards. If white ink is needed (for colored boards), see Add a substrate preset on page 64.

Output handling

- You can usually recover from heat warp by laying the substrate flat and allowing it to cool.

- Always use a very sharp blade when trimming.

- The substrate is susceptible to dents, and it damages more easily than most other substrate types. Handle samples with care.

- Substrates with paper liner have a delicate surface that may show gloss changes if they are slid from the stack. Handle paper-liner substrates with special care.

Foam PVC

Also known as closed-cell PVC foamboard

Brand name examples: Celtec, Forex, Komatex, Sintra, Palight, Trovicel

Preparation

- If the substrate has a protective film attached, peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Some foams may have a smooth and soft surface that can be easily scratched or damaged. Handle substrates with care.

Printing

- Check at https://www.printos.com/ml/#/homeMediaLocator whether the substrate preset for your specific substrate is available. If it is, download and install it in your printer and RIP.

- If there is no specific substrate preset for your substrate, use the **Generic PVC Foam** preset.

Recommended print modes

📝 **NOTE:** Not all print modes may be available at the printer's introduction date.

- To print color images that do not require white ink, select the **Fast** print mode for applications that will be viewed from a distance of at least 3 m (10 ft). For increased color saturation, use **Outdoor signage** or **Indoor signage**.

Generic presets	Color-only print modes (no white)			
	Fast	Outdoor signage	Indoor signage	High quality
Generic PVC Foam	3p-70%	4p-90%	6p-110%	N/A

- To print images that require white ink, the following print modes are available:

  - **Underflood:** Use this white mode on colored foam when you need realistic colors. In this mode, a white ink layer is printed first and then a color layer is put on top of it.

  - **Spot:** This mode is used on colored foam substrates when white ink is not mixed with other colors in the same area.

Generic presets	Color + white print modes								
	Underflood white modes			Overflood white modes			Spot white modes		
	White UF W100	White UF W160	White UF W260	White OF W100	White OF W160	White OF W260	White SP W100	White SP W160	White SP W260
Generic PVC Foam	N/A	N/A	33p-120%	N/A	N/A	N/A	N/A	N/A	18p-120%

Substrates thinner than 2.5 mm may show a higher tendency to deform than thicker substrates. For thin substrates, HP recommends using the available heat-sensitive print modes. Heat-sensitive print modes provide a smoother temperature ramp that improves sheet flatness.

Generic presets	Color + white heat-sensitive print modes		
	Fast heat-sensitive	Heat-sensitive	Heat-sensitive with white
Generic PVC Foam	8p-80%	12p-110%	

Output handling

- No special handling required.

- If ink adhesion is inadequate, wait 24 hours before finishing.

- Always use a sharp blade when cutting.

Glass and ceramics

Considerations

- The smooth, non-porous surface of glass does not provide a good interface for ink to adhere, making it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

- Adhesion can be improved with the use of a pre-treatment or primer.

Preparation

- Use a lint-free cloth with a glass cleaner to remove dust or debris. Do not use a detergent.

- Use clean cotton gloves to avoid fingerprints.

- If a pre-treatment primer is used, apply it according to the instructions and allow it to dry before printing.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

- For applications that require fine detail, use the **Fine text** option and/or lower the printhead height from its nominal 2.2 mm (0.085 in) setting.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can easily be scratched.

- Use protective gloves to avoid the risk of burning your hands.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

Wood

Examples: Raw, primed or painted wood, MDO, MDF

Preparation

- Store substrates flat, in a clean environment with the same or similar temperature and humidity as in the printer room. Changes in temperature or humidity will cause the substrate to warp.

- Substrates are often supplied non-rectangular, so trimming them to rectangular may be necessary for some applications, such as edge-to-edge printing. Make sure all edges are cut clean and are free from burrs and/or excess substrate.

- Use compressed air to blow dust and debris from the printing surface.

Recommended print modes

- Depending on application, ink coverage, image content, and wood surface, all print modes may print acceptably.

Printing

- Select **Wood** when configuring and loading these substrates.

- Some surfaces are more porous and absorb the ink, giving a washed-out appearance. Use the RIP software's **Saturated rendering intent** option to increase saturation.

- Non-white substrates may not be detected by the onboard camera. If so, create a copy of the **Wood** substrate using the Substrate Wizard, and change the **Detectable by printer** option to **No**.

- Due to the strength and shape memory of wood products, the printer may not be able to feed some warped sheets.

- A head height greater than the normal 2.2 mm (0.085 in) setting may be necessary to avoid the carriage scraping on non-flat materials.

- Use a Wood substrate preset from the RIP software.

Output handling

- These substrates are heavy in large sizes. Do not exceed 68 kg (150 lb).

Polycarbonate sheet

Brand name examples: Lexan, Makrolon, Tuffak

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

Polystyrene sheet

Examples: High-impact polystyrene sheet, HIPS

Preparation

- This substrate tends to hold static charge. Avoid sliding it from the stack or carrying it across carpeted surfaces.

- Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 90% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

Printing

- Select **Polystyrene** when configuring and loading these substrates.

- These substrates are heat-sensitive, specifically thinner sheets: less than 0.4 mm (0.015 in). They may require a higher vacuum setting, faster print modes, greater than standard head height, and printing delays in some combination to achieve best output.

- Use a Polystyrene substrate preset from the RIP software.

Output handling

- If ink adhesion is inadequate, print in a higher-quality mode and/or wait 24 hours before finishing.

- Always use a sharp blade when cutting.

Polypropylene sheet

Brand name examples: Akyplen, Polygraph.ics.P

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

PVC rigid sheet (U-PVC)

Brand name examples: Akyplen, Polygraph.ics.P

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in <u>Static electricity on page 42</u>.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

PET (A-PET, PET-G) rigid sheet

Brand name examples: Lumex, Vivak

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

PE (LDPE, HDPE) rigid sheet

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

Honeycomb panels

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.

Metal panels

Considerations

- In general, ink adhesion is better on polycarbonate then on acrylic or glass.

- However, the smooth, non-porous surface makes it susceptible to scratches and scraping. Special precautions are necessary in the handling and display of the printed piece to protect it from abrasion.

Preparation

- Peel off the protective film from one side, leaving the other side protected until finishing or installation of the finished graphic.

- This material tends to hold static charge. Follow the advice in Static electricity on page 42.

- Ensure that substrate tables are attached and secured to the printer to provide a grounding path for static-loaded substrate.

- Wipe the printing surface with an anti-static tack cloth to remove static charge and any dust or debris.

- If an anti-static tack cloth is not available, 70% or higher IPA on a lint-free cloth can be used to remove dust or debris. Allow the sheet to sit out on the input table for about 5 minutes to allow the IPA to evaporate and the static to dissipate.

- Depending on the end-use application, ink adhesion may be an issue. Use of a polycarbonate primer can improve ink adhesion.

Printing

- Select **Clear Sheet** when configuring and loading these substrates.

- Substrate placement detection is disabled when using these substrates. When loading, it is necessary to enter the location of the left (user side) and right (service side) edges of the substrate according to the **Substrate measurement option**.

- Use a Clear Sheet substrate preset from the RIP software.

Output handling

- Use clean cotton gloves to avoid fingerprints.

- Take care when loading or lifting sheets off the table, as substrate and ink can be easily scratched.

- Depending on the end use application, some treatment after printing may be necessary to minimize the risk of surface damage.