Best practices for printing to thick fine art papers with Epson SureColor® P9570 and Epson SureColor® P7570

Some thick fine art papers are experiencing issues with print quality using SureColor® P7570 and SureColor® P9570. Thickness ranges can be anywhere between .38 mm - .51 mm. The problems can range from media "slipping" using the media core adapters and head strikes on the media, to media load issues with skew and others.

This document is to address some of the issues with best practices and key operational procedures to check and maintain. Each of the issues are addressed one by one and should be combined to create the best experience while printing fine art media with SureColor P7570 and SureColor P9570.

Media "Slipping" on the core

When media core adapters are connected to a roll and loaded, it is very important to check that there is no slipping of the media adapter onto the core of the media. If there is slippage, then the media cannot feed properly and can cause quality issues.

If there is slippage of the adapter into the core then consider contacting the media manufacturer to replace the media, replace the media adapter, or use something like a wide rubber band or silicon sleeve to adhere over the adapter insert to brace the inside core. The core adapter is built to accommodate an interior diameter of 2" or 3" and any variance can be problematic causing slippage, affecting paper feed when loading and printing. Media adapters must insert and firmly control the movement of the core and slippage is not desirable.

The media inductive paper feed system requires a media core to securely fit into the media adapter with no slippage. Any slippage can cause media feed and print quality performance. Address the media adapter core slippage first then reprint. This should address the issue.

It also may be necessary to reduce the Roll Paper Back Tension which can be done in Advanced Paper Settings. More details are in this document.

End of media adhered to the core

It is possible that media can come off the core at the end of the roll due to tape with insufficient adhesion. This is generally not good and will cause quality issues. Media that comes off the core can "telescope" and be problematic when loading, printing, and unloading. If media

does come off the core, it is necessary to retape the media onto the core and reroll the media. It is also important to notify the media manufacturer that this is happening. Factors such as environmental conditions of storage and ages of media can affect adhesion to the core. For roll media, only use media that is adequately secured to the core as this is important for the media feed system in SureColor® P7570 and SureColor® P9570 to work properly. Telescoping or media not affixed to the core will result in issues if not addressed.

SureColor® P7570 and P9570 uses an advanced inductive roller system that produces forward and backward tension. This is different than other printers in the SureColor® P-Series line, so it is important that media is securely attached to the core and that Roll Paper Back Tension is managed appropriately.

Media Length Tracking

It is good practice to use "Media Length Tracking" and "End Media Warning" to alert you when you are close to the end of the roll. It is recommended to enter 24" - 36" as a warning to indicate the media remaining at the end of the roll is ready for replacement. Once alerted, remove the media and insert a new roll. It is not good practice to use media up to the very end of the roll and have the media feed system "pull off" the media at the end of the roll. This can cause damage to the printer if adhesive gets on onto the platen and print head. Media length tracking also helps manage how much is left on a roll by printing a value and barcode that is read by the printer. Epson Product Management highly recommends using this feature.

Head Strikes on the Media

If you experience ink marks on the print, it is because the print media has encountered the print head. This is never a good practice. Certain steps can be made to insure this does not happen. With the SureColor® P7570 and SureColor® P9570, the media type choice on the LCD panel of the printer is of most importance when printing with the Epson Driver. Epson America supplies fine art media types on the front panel and in the driver for the following medias. Info can be found at www.epson.com/propapers

Legacy Fiber	Legacy Textured	Legacy Platine	Legacy Baryta
Legacy Etching	Cold Press Bright	Cold Press Natural	Hot Press Bright
Hot Press Natural	Exhibition Fiber	Velvet Fine Art	Premium Luster Photo Paper (260)
Metallic Photo Paper Luster	Metallic Photo Paper Glossy	Exhibition Canvas Matte	Exhibition Canvas Gloss
Exhibition Canvas Gloss			

It is best practice to select and use the proper media type on the LCD as well as the Epson Driver or Epson Print Layout. For example: When using Legacy Fiber, select Legacy Fiber in the Fine Art Paper Folder on the LCD. If you print with a different brand of media, please consult the media manufacturer.

Support for 3rd Party (non EPSON) Media

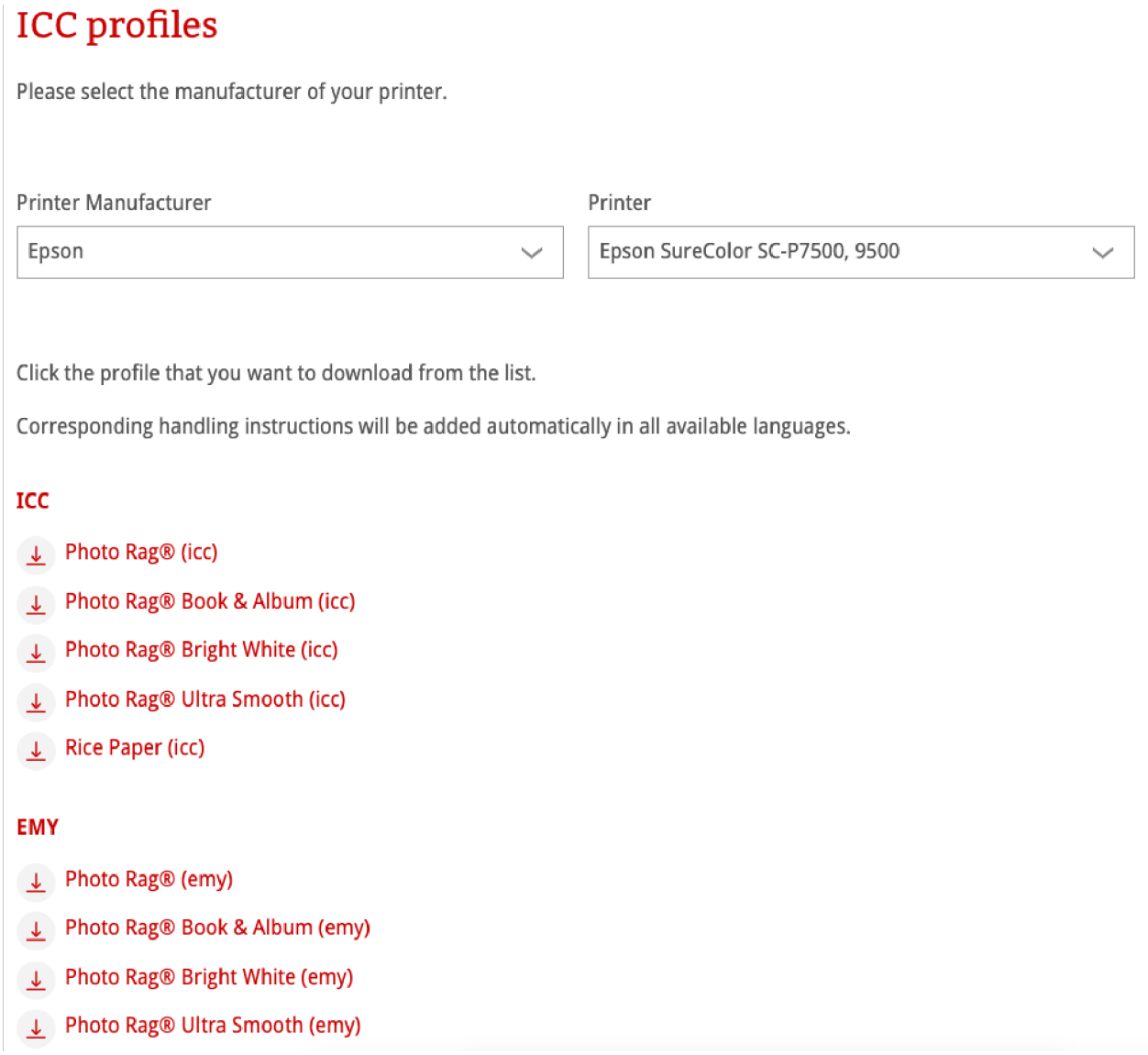
When using other manufactures fine art and photo media it is important to use the appropriate and approved media type and ICC profile as per the media manufacturer for the SureColor® P7570 / P9570. It is important to note that not all media may be officially supported by the media manufacture and best practice is to consult the media manufacture for approved media types and ICC for a given media. Each manufacture supports their media and the SureColor P7570® and SureColor® P9570 by publishing media settings in the following manner.

ICC and Base Media Type

EPSON EMY – This is a portable Epson Media file format that imports into Epson Media Installer and will automatically install the named media type and advanced media setting parameters to the front panel of the printer and synchronize with your driver media types. It also includes installing the ICC profile into its appropriate system folder for use in Adobe® Ps, Lr, Epson Print Layout and any other application with a color management system.

Using the portable .emy file download/upload system is the preferred method for media vendors to distribute and support their media types used in SureColor® P7570, P9570, P900, P700, P8570D, P6570D, P6570DE, and P6570E

See the example from Hahnemuhle®

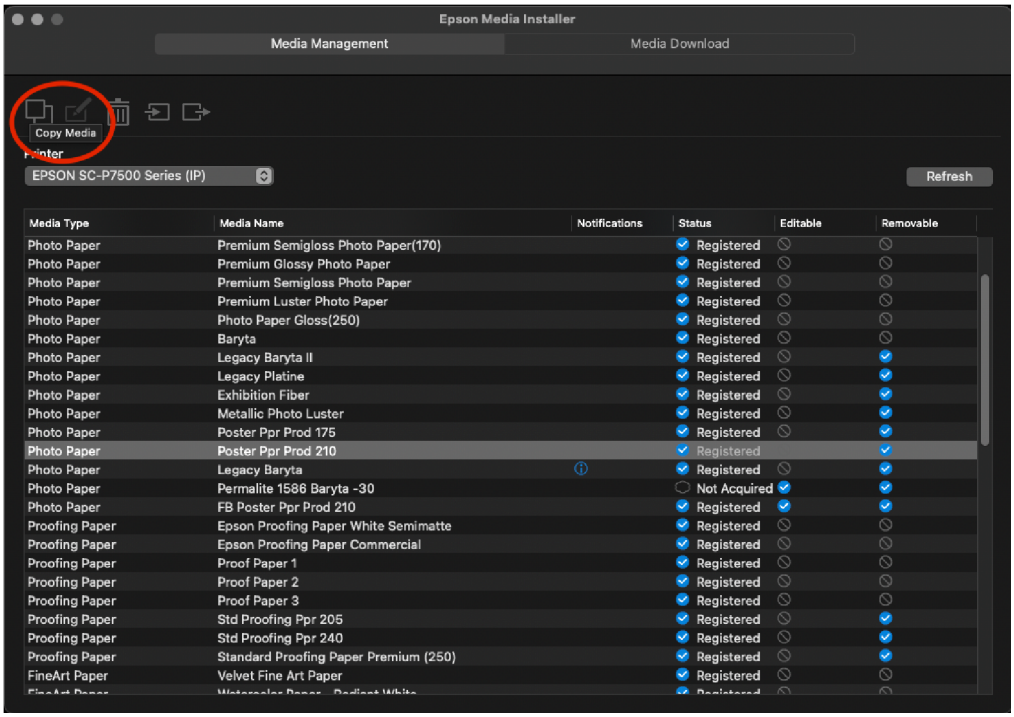


The approved and supported .EMY which includes approved and tested base media type and ICC profile should give you excellent results. In cases where the results are unsatisfactory, especially if there are print quality issues such as head strikes, paper wrinkle, loading issues with skew, ink load, etc, it is best practice to modify and test advanced settings of the media type and if needed build a custom ICC profile.

The following advanced media settings are defined as follows and can be accessed in two ways:

1. On the front panel of the LCD under Roll Paper > Advanced Paper Settings

2. Modifying an “editable” media type in Epson Media Installer



Advanced Media Settings:

Paper Thickness: It is very important to check paper thickness and make sure it is set to the thickness of your named media type and NOT a "base" media. All Epson Medias have paper thickness values in the Media Type. 3rd Party Media do not unless it is in an .EMY file. Consult the data sheet for your media. You may need to convert from mil to mm which can be done by an online calculator.

Platen Gap: The platen gap is set by default for each media type set on the LCD and as a global Platen Gap Setting for all media. The platen gap is the distance from the platen to the base of the print head and ink nozzles. The platen gap needs to take into consideration the thickness of the media which is why proper thickness is important. The platen gap is set to a default value according to the media type loaded.

In the case of 3rd Party media. All newly created media either on the front panel or Epson Media Installer use a "base media". This base media has a default platen gap. In some cases the platen gap will have to be raised to avoid head strikes if occurred in the middle of a print. Or in some cases the platen gap needs to be lowered to combat micro banding.

For **Platen Gap on an individual Media Type** in Advanced Paper Settings, the values are as follows and units are mm:

Setting	Value (mm)	Description
Platen Gap	1.2	Gap between platen and print head
	1.6	
	1.9	
	2.1	
	2.4	

Sometimes it is necessary to increase the platen gap to avoid head strikes / rubbing which cause print defects. Conversely, sometimes it is necessary to lower platen gap to get rid of unwanted banding in certain areas of the image. Proceed with caution and always make tests.

For Platen Gap Offset set globally for the Printer: go to *Menu > Settings > General Settings > Printer Settings > Paper Source Settings > Platen gap Offset*

Setting	Options	Description
Platen Gap	Standard	Gap between platen and print head
	Wide	
	Wider	
	Widest	

The default is "Standard" but if you need to increase the Platen Gap for every media, choose wide, wider, or widest. Best practice is to modify platen gap only if needed and for the individual media type you are having issues with.

Setting	Options	Description
Top Margin	3 mm	Margin for the leading edge of the media
	15 mm	
	20 mm	
	45 mm	

Top Margin: When not printing BorderFree®, the top margin is set by default for each media type selected. The top margin is also known as **the leading edge.** This is the edge that comes out of the printer first. Sometimes with thick fine art media, there is excessive curl which can be caused by age of media or by tension from being loaded into the printer for a long period of time. It is best practice to increase the top margin to 20 mm or 45 mm if you get a head strike or ink mark on the leading edge of thick fine art media.

Bottom Margin: When not printing BorderFree®, the bottom margin is set by default for each media type selected. The bottom margin is also known as **the trailing edge.** There are only two options for training edge. The default is 15 mm and considered best practice for thick fine art media.

Margin Between Pages: Standard margins are 15 mm for both top and bottom and 3mm for left and right (Unless printing BorderFree®). This default setting should not affect thick fine art workflows

Paper Suction: This setting affects paper suction vacuum for each media. With some fine art medias (.48 mm+), you may need to increase the suction more than the default setting.

Setting	Options	Description
Paper Suction	-4	The lower the value the weaker the suction, the higher the value the stronger the suction
	-3	
	-2	
	-1	
	0	
	1	
	2	
	3	

Note: With some thin or soft papers you may need to decrease suction (>.48 mm) to avoid print quality issues. Consult media manufacture for tested suction values.

Back Tension: The media feed inductive roller tension system is present in SureColor® P7570 P9570, P10000 and P20000. The default back tension of the roll system is Standard/Normal but you can change to High or Extra High 1 to 5. Increase the tension if media wrinkles when printing.

Setting	Options	Description
Back Tension	Normal	Value for paper feed tension. Adjust if wrinkling occurs.
	High	
	Extra High (1-5)	

Note: For some canvas media that wrinkles when printed, increase tension to avoid print quality issues.

Drying Time: The dry time is set for each pass and/or each page. The dry time pauses the print head swath as it prints across the media. Increasing the dry time per pass allows time for the ink to settle into the media before the next print swatch takes place. Increase this value with thick fine art media if you see issues with heavy ink load areas in an image.

Paper Size Check: This setting is generally not important for thick fine art media with the exception that if off, the printer may print beyond the edges of media causing ink to enter the platen / printer.

Auto Cut: This setting is set by based on media type. Most thick fine art papers are set to Never Cut giving you the ability to media feed and manually cut. **This is generally best practice.**

Skew Reduction: This setting is used to eliminate skew when loading and printing, but it is not the only setting. *See Lateral Feed Adjustment.* Best practice is to keep skew reduction on.

Lateral Feed Adjustment: This is an important setting for thick fine art media for SureColor® P7570 / P9570. This setting is on or off. When set to “on” the paper feed on the full (left side)

and home (right side) can be made uniform by the sub paper feed roller. This setting should be on for thick fine art media (.48mm+) but off for thin papers (>.48 mm) to avoid wrinkling.

Another note on paper skew. If skew persists even when settings are managed, it is best practice to reload the media. Sometimes the media loads and the roll is not wound well on the core and has significant slack. Eliminate slack, square up the media on the core and reload. If the media is off its core then reattach to the core. The following steps and settings are best practice for printing on thick fine art media.

1. Reload media, making sure media is wound well on the core and "squared up". Confirm the media is attached to the core.
2. Lateral Feed Adjustment: On
3. Skew Reduction: On
4. Paper Size Check: On
5. Paper Skew Check: On

If all of these options are selected and you still get paper skew errors. Preform the PF paper feed adjustment (quality) in Advanced Paper Options.

Paper Eject Roller: This is another important setting to consider when printing to thick fine art media on SureColor® P7570 and P9570. The eject roller is a star shaped wheel and mechanism that is used to aid the paper eject process. It is typically set to Auto (which will be on or off based on Epson Base Media). It is generally best practice to set to **Do Not Use** if you see damage as "little wheel marks" on the print surface.

Roll Core Diameter: Be sure it is set to the accurate diameter. This affects paper feed mechanism.

Paper Feed Offset: This is also an important setting if you see banding in uneven color portion of the print. The options range from -1.0 to 1.53 percent. This setting is present when using a 3rd Party "custom media" or a copy of an existing Epson Media. You would leave at default unless you see horizontal banding. If you see banding, then run **Paper Feed Adjustment – Quality First** which after preforming will set the appropriate value. Paper Feed Adjustment is located at Menu > Paper Settings > Roll Paper > Paper Feed Adjustment > Quality First

Paper Feed Amount Adjustment: This adjustment can help if you see horizontal banding in the paper feed direction. It can also assist if the margins differ from specified margins. Give priority to quality for raster files.

Final Thought:

The SureColor® P7570 and SureColor® P9570 print beautifully using thick fine art medias from Epson and other manufacturers. It's best practice to use the proper media type that has been tested and qualified by the media manufacturer first. Then if further settings need modification, then test on a setting by setting basis. More info can be found at www.epson.com/support and our Epson Print Academy™ YouTube channel