Enhanced Color Management:

Creo Color Matcher JTP

Release 1.0
Release Notes

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4,456,924	5,291,273	5,519,852	5,708,736	5,973,801	6,136,509	6,295,076
4,500,919	5,323,248	5,526,143	5,713,287	5,986,819	6,137,580	6,299,572
4,558,302	5,325,217	5,532,728	5,742,743	5,995,475	6,147,789	6,318,266
4,743,091	5,339,176	5,561,691	5,764,374	5,996,499	6,158,345	6,340,817
4,992,864	5,343,059	5,568,595	5,764,381	5,998,067	6,159,659	6,352,816
5,049,901	5,355,446	5,576,754	5,771,794	6,003,442	6,164,637	6,353,216
5,079,721	5,359,451	5,579,115	5,785,309	6,014,471	6,180,325	6,366,339
5,081,617	5,359,458	5,592,309	5,802,034	6,016,752	6,181,362	6,371,026
5,103,407	5,367,360	5,594,556	5,813,346	6,031,932	6,181,439	6,377,739
5,111,308	5,384,648	5,600,448	5,818,498	6,043,865	6,186,068	6,387,597
5,113,249	5,384,899	5,608,822	5,854,883	6,060,208	6,189,452	6,396,422
5,122,871	5,412,491	5,615,282	5,861,904	6,063,528	6,191,882	6,396,618
5,124,547	5,412,737	5,625,766	5,861,992	6,063,546	6,204,874	6,407,849
5,132,723	5,420,702	5,636,330	5,875,288	6,072,518	6,208,369	6,414,755
5,150,225	5,420,722	5,649,220	5,894,342	6,090,529	6,214,276	6,422,801
5,153,769	5,459,505	5,650,076	5,900,981	6,096,461	6,217,965	6,435,091
5,155,782	5,473,733	5,652,804	5,934,196	6,098,544	6,252,522	
5,157,516	5,481,379	5,680,129	5,942,137	6,107,011	6,260,482	
5,208,818	5,488,906	5,691,823	5,946,426	6,112,663	6,266,080	
5,208,888	5,497,252	5,691,828	5,947,028	6,115,056	6,266,134	
5,247,174	5,508,828	5,696,393	5,958,647	6,121,996	6,267,054	
5,249,067	5,509,561	5,699,174	5,966,504	6,130,702	6,268,948	

Creo Inc.
3700 Gilmore Way
Burnaby, B.C., Canada
V5G 4M1
Tel: 1-604-451-2700
Fax: 1-604-437-9891

http://www.creo.com

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Introduction

We are pleased to send you the Creo Color Matcher JTP. These release notes describe the features and availability for version 1.0 of the software.

What Is in These Release Notes

These release notes include the following sections:

Features

Availability and Support

Known Problems

Comparison with the Prinergy OEM ColorMatcher

Features

The Creo Color Matcher is available as a Job Ticket Processor (JTP) for Prinergy printing workflows.

Support for Color Management in Prinergy

The Creo Color Matcher contributes to color management in Prinergy by supporting:

- RGB image conversion

  RGB images and graphics can be automatically converted to CMYK using a standard ICC profile shipped with Prinergy, or a custom profile supplied by the user.

- CMYK to CMYK color matching

  For CMYK to CMYK color matching, the Color Matcher transforms the color space of a PDF file to a color space appropriate for a specific output device using ICC profiles. The CMYK to CMYK color matching during refine is a standard feature. CMYK to CMYK for proofing is a separately-licensed option.

- Device-independent color spaces such as L*a*b* are converted to a final color space according to the ICC profile used in the process plan.

Support for Custom and Standard ICC Profiles

When color matching is enabled as part of the refine process, color data is matched to an output device. When color matching is enabled for proof output, the transformed color data is transformed again to a color space suitable for proofing, simulating final output on the proofing device.

- With the Basic Color Matcher license, users can now refine to any other destination color space using custom ICC profiles as well as standard, Creo-issued profiles.
- With the Advanced Color Matcher license, users can refine and output proofs using combinations of custom and standard profiles, that is, the source and destination profiles can now include custom profiles as well as standard, Creo-issued profiles.

See Prinergy online help for more information on using ICC profiles with Prinergy.

Color Matcher Features

The feature set for the Creo Color Matcher includes the ability to:

- Map spot colors
- Perform overprint conversions
- Match colors
- Handle CMYK black
- Support extra colors such as L*a*b* spot color recipes

These features are available in various combinations in the Refine, Loose Page, and Imposition Proof process plans.

Availability and Support

The Creo Color Matcher is the color matcher shipped with new Prinergy systems as of April 27, 2003.

- All new customers will get the new Creo Color Matcher with their Prinergy system if their order includes color management software.
- The Creo Color Matcher runs on a Prinergy 2.1.0.15.system or higher.

Licensing

There is separate licensing available for:

- Creo Color Matcher JTP base
- CMYK to CMYK conversion option for proofing (CMYK to CMYK for refining is included in the base license)

Upgrading

As an existing Prinergy customer, you have some options:

- Obtain the Creo PDF Trapper by upgrading to the Prinergy 2.2 major update. (Free for customers under a service contract, chargeable for time and materials.) A new license key must be generated to enable the new Creo Color Matcher.
- You must use the Creo Color Matcher with the Creo PDF Trapper.
- Only one proprietary color matching application can be run on a Prinergy system at one time.

Updating

Creo delivers a Creo Color Matcher update with a software update for Prinergy 2.1.0.16 or higher. Check the Prinergy update's readme file to confirm that a Creo Color Matcher update is included.

Documentation

Creo Color Matcher JTP documentation is available in the online help for Prinergy Workshop.

Localization

- The Prinergy Workshop online help and UI are available in French, German, Spanish, and Japanese.

Training

For information about customer training and technical support, please contact your local Creo representative.

Known Problems

- For some input files (one out of hundreds tested, with an image or object with five or more inks) the Color Matcher produces files that cause the thumbnail RIP to crash. This does not affect the proofing or plating RIPs. The workarounds include: not making thumbnails, mapping spot colors to process, or not using recipe substitution.
- If the file does not have all the process colorants present, for example, after refining with a gray target profile, proofing with a CMYK target profile results in objects looking lighter than they will on press and than they do in PDF. Possible workarounds include: not color matching, turning on Retain CMYK Black, or using a DeviceLink profile that preserves the black channel.
- If an object has a spot color and some, but not all, process colors, the process colors are not color-matched even when CMYK color matching is turned on.

Known Differences with the Prinergy OEM ColorMatcher

User Interface

The look and feel of the Creo Color Matcher JTP is the same as the Prinergy OEM JTP it replaces, with a few minor changes in the graphical user interface. This is convenient for the press operator because there is no training required when the Prinergy OEM JTP is upgraded to the Creo Color Matcher JTP.

ICC Profiles Supported

An important added feature of the Creo Color Matcher JTP is the ability to use custom profiles as well as Creo-issued standard profiles at the refining and proof output stages.

Core Color Matcher–Print (Refine)

Core Color Matcher: Print (Refine)	**Creo**			**Prinergy OEM**		
	ICC Profiles Available			**ICC Profiles Available**		
	Supplied	**Custom**	**Embedded**	**Supplied**	**Custom**	**Embedded**
RGB to CMYK	x	x		x		
L*a*b* to CMYK	x	x		x		
CMYK to CMYK	x	x				
RGB+Spot to CMYK	x	x				
Embedded ICC to CMYK	x		x			
Device Link RGB to CMYK		x			x (graphics)	
RGB to Grayscale	x	x		x		
L*a*b* to Grayscale	x	x		x		
CMYK to Grayscale	x	x				
	Other Support Available			**Other Support Available**		
CMYK DB functions	x			x		
Pantone CMYK DB	x			x		
Pantone L*a*b* DB	x			x		

Core Color Matcher–Proof

Core Color Matcher: Proof	Creo		Prinergy OEM	
	ICC Profiles Available		ICC Profiles Available	
	Supplied	Custom	Supplied	Custom
RGB to CMYK	By Creo		By Creo	
L*a*b* to CMYK	By Creo		By Creo	
CMYK to CMYK	By Creo			
RGB+Spot to CMYK	By Creo			
Embedded ICC to CMYK	By Creo			
	Other Support Available		Other Support Available	
CMYK DB capabilities	x		x	
Pantone CMYK DB	x		x	
Pantone L*a*b* DB	x		x	
Epson 6-color support	Later		x	

Advanced Color Matcher–Print (Refine)

Advanced Color Matcher: Print (Refine)	Creo			Prinergy OEM		
	ICC Profiles Available			ICC Profiles Available		
	Supplied	Custom	Embedded	Supplied	Custom	Embedded
CMYK to CMYK	x	x		x	x	
RGB+Spot to CMYK	x	x		x	x	
Embedded ICC to CMYK		x	x		x	x
CMYK to Grayscale	x	x		x	x	
CMYK to Hexachrome	x	x		x	x	
Spot to Hexachrome	x	x		x	x	
RGB to Hexachrome	x	x		x	x	

Advanced Color Matcher–Proof

Advanced Color Matcher: Proof	Creo		Prinergy OEM	
	ICC Profiles Available		ICC Profiles Available	
	Supplied	Custom	Supplied	Custom
CMYK to CMYK	x	x		x
RGB+Spot to CMYK	x	x		x
Embedded ICC to CMYK	x	x		x
CMYK to Grayscale	x	x		x

Processing Tips

When basic color management is done during refining, a change in the color match engines will not affect output plates in any way. If you wish to re-refine an old file that was color-matched with the old engine, simply use a process plan that does not re-apply an ICC profile. Advanced color matching can also be done on proof output and these results are highly compatible with the results from the Prinergy OEM ColorMatcher JTP.

Compatibility with Trapping Software

You must use the Creo Color Matcher with the Creo PDF Trapper and the Prinergy OEM ColorMatcher with the Prinergy OEM Trapper.

Additional Differences

- When processing /DeviceGray image objects, the Prinergy OEM ColorMatch JTP changes the color space to /Separation /Black, but the Creo Color Matcher changes the color space to /DeviceCMYK. When overprint is enabled, the resulting image from the Prinergy OEM JTP overprints the CMY plates, but the image from the Creo Color Matcher knocks out CMY; both overprint spot plates. The image from the Creo Color Matcher more accurately represents the results of RIPing the original /DeviceGray image.
- When **Set Overprint CMYK white to knockout** is off, the Prinergy OEM ColorMatcher allows white to overprint for all color spaces except RGB, while the Creo Color Matcher allows white to overprint for all color spaces.
- RGB alternate color spaces are converted to press space when RGB color matching is turned on. The exception to this is Photoshop duotones, tritones, and quadtones, where the Creo Color Matcher does not convert the RGB alternate color space to process.
- When **Use Alternate Color Definition from Color Editor if Available** is turned on, the Creo Color Matcher applies CMYK recipes to produce tint transforms even when no mapping or conversion occurs. This means that the recipes from the database will be applied during proofing, with the RIP doing the conversion to process, which is not the case with the Prinergy OEM ColorMatcher.
- When mapping one spot to another, the Creo Color Matcher harmonizes the spot recipes, while the Prinergy OEM ColorMatcher, after performing this kind of mapping, will allow two objects drawn with the same spot colors to have the same name, but different recipes.
- When any of C, M, or Y is less than 1% in a vector object, the Prinergy OEM ColorMatcher does not convert it colorimetrically. The Creo Color Matcher does convert it colorimetrically unless these separations are all exactly zero (0).
- With the Creo Color Matcher, RGB recipes may be converted to press space regardless of whether RGB color matching is turned on, depending on other job requirements such as trapping or spot color conversion that call for CMYK recipes. When converting while RGB colormatching is turned off, the Creo

Color Matcher uses the default RGB profile, AdobeRGB 1998. In the same case, the Prinergy OEM ColorMatcher leaves RGB recipes as RGB and converts RGB spots to RGB process.