**Metallic Silver ECO-SOL MAX Ink for the
Roland SOLJET PRO III XC-540MT Printer/Cutter**

Release & Pricing:

Q. What is the cost of Metallic Silver ECO-SOL MAX ink and when will it be available?

A. The new Metallic Silver ECO-SOL MAX ink can be ordered in 220ml cartridges starting October 26, 2009 at a list price of $229.99 per cartridge. Shipments will begin in November 2009.

Q. What is the cost per square foot for Metallic Silver ECO-SOL MAX ink?

A. For full coverage of the Metallic Silver ink, the price per square foot varies greatly depending on the ink limit specified in VersaWorks for the media selected. When printed as a solid silver fill, Metallic Silver ink is about $1.97 per sqft on Glossy Vinyl and $1.80 per sqft on Clear PET Film. Rather than printing an entire image with just Metallic Silver, the best designs incorporate silver as accents. Bold silhouettes, geometric patterns and large text elements enable the Metallic Silver to stand out prominently. Because the amount of the Metallic Silver used varies greatly depending upon the design and application, there is truly no standard average running cost. Testing different percentages of Metallic Silver as a spot color will help end users determine the best density and brilliance for the application at hand while reducing running costs. The 12 metallic colors in Roland VersaWorks were created by combining CMYK and Metallic Silver and generally use less silver ink than Metallic Silver as a spot color. Roland VersaWorks includes an ink consumption estimator that provides a guide to the total amount of ink used for individual print jobs. By ripping the job in Roland VersaWorks before printing, the ink estimator can also show the amount of Metallic Silver ink a particular job will use if Metallic Silver print mode is selected in the Quality settings window.

Q. What Roland models are compatible with the new Metallic Silver ECO-SOL MAX ink?

A. The new XC-540MT is the only Roland model specially designed to handle the Metallic Silver ink. The XC-540MT printer/cutter features a unique ink circulation system developed by Roland to avoid settling in the ink lines and to dramatically reduce ink waste. Metallic Silver ECO-SOL MAX ink cannot be used in any other model.

Q. What are the main features and benefits of Metallic Silver ECO-SOL MAX ink?

A. New Metallic Silver ECO-SOL MAX ink is the world's first metallic silver inkjet solution and is designed, certified and supported by Roland to run in the SOLJET PRO III XC 540MT. The new eco-solvent silver ink has a rich gloss level and excellent printability. It also features high opacity and density when printing on clear or dark substrates. As a result, it is possible to print high quality silver fills and accents and a wide range of metallic colors when using the silver ink as an undercoat with CMYK. The new silver ink produces crisp text, sharp line art and dramatic high-impact graphics. Metallic Silver ECO-SOL MAX ink can be used for indoor and outdoor applications depending on the media and delivers impressive printing capabilities on a variety of coated and uncoated media. A new Roland Metallic Color library in VersaWorks features 12

metallic colors created using CMYK+Mt in single pass printing. This palette includes silver, gold, bronze and nine other metallic colors. Users can also easily create and save their own custom metallic spot colors in Roland VersaWorks RIP software.

Q. What colors are in the Roland Metallic Color library?

A. The 12 colors are: Silver, Bronze, Titan Black, Gold, Maroon, Violet, Purple, Navy, Blue, Cobalt, Green and Olive. These 12 metallic colors print using CMYK+Mt in single pass mode. The CMYK inks combine with the Metallic Silver to produce these unique pearlescent colors. Users can also create completely new metallic spot colors in Roland VersaWorks.

RVW-MT-Silver		RVW-MT-Purple	
RVW-MT-Bronze		RVW-MT-Navy	
RVW-MT-Titan Black		RVW-MT-Blue	
RVW-MT-Gold		RVW-MT-Cobalt	
RVW-MT-Maroon		RVW-MT-Green	
RVW-MT-Violet		RVW-MT-Olive	

Q. How do I use Metallic Silver in my design applications such as Adobe Illustrator?

A. To create graphic elements that print with Metallic Silver ink only, select the Roland spot color: RDG_MetallicSilver in your design program and apply it to the graphics before saving. To use one of the 12 colors in the Roland Metallic Color library that prints using CMYK+Mt, select one of the Roland Metallic spot colors such as RVW-MT-Gold and save it as an EPS or PDF file.

Q. What kind of media can be used with Metallic Silver ECO-SOL MAX ink?

A. With the Metallic Silver ink option the XC-540MT can print on a wide range of coated and uncoated substrates. In addition to vinyl, canvas and paper, the Metallic Silver ink can be used transparent film and banner media. The metallic effect and brilliance will vary depending on the media. For maximum impact, Roland suggests glossy media and films that will highlight the metallic effect. Lamination is strongly recommend to protect and enhance the metallic silver printed surface. Printing is possible even on uncoated media, however the ink adhesion and metallic effect may be compromised. The overall quality and surface finish of the media will affect the appearance of the printed metallic output. Testing is recommended to ensure media compatibility.

Roland's media line offers a good selection of tested media with profiles for metallic ink applications. The XC-540MT can also produce exceptional output using many of our fine media products including solvent glossy paper, block out banner vinyl and premium cast vinyl from our Eco Sol Media (ESM) line.

Q. What types of applications are well suited for Metallic Silver ECO-SOL MAX ink?

A. Metallic Silver ink can be used for many higher-end applications that will attract attention and command premium prices in the marketplace. Signs, window decorations, labels and package comps can all be enhanced with dramatic metallic accents. POP displays posters, banners and even vehicle graphics will standout with the impact of metallic colors. In addition to standard white vinyl and banner media, Metallic Silver ink is ideal for transparent media such as clear vinyls and PET films. Metallic Silver ink will open up new creative applications for you and your customers, limited only by your imagination.

Q. How fast is the XC-540MT when printing with the Metallic Silver ink?

A. When printing with Metallic Silver ink, the XC-540MT has a maximum print speed of 23 sfph $(2.1m^2/h)$ in single color Metallic Silver mode and 17 sfph $(1.6m^2/h)$ in CMYK+Metallic Silver mode. Please refer to the following chart for comparison.

Metallic Silver Settings	Mode	Resolution	Passes	Print Speeds
CMYK + Metallic Silver	High Quality	720 x 1440	10	17 sfph $(1.6m^2/h)$
Metallic Silver	High Quality	720 X 1440	10	23 sfph $(2.1m^2/h)$
CMYKMt(v) onWhite	High Quality	720 x 1440	10	17 sfph $(1.6m^2/h)$
CMYKMt (v) underWhite	High Quality	720 X 1440	10	17 sfph $(1.6m^2/h)$
White -> CMYKMt(v)	High Quality	720 x 1440	16	3.2 sfph $(0.3 m^2/h)$
CMYKMt -> White(v)	High Quality	720 X 1440	16	3.2 sfph $(0.3 m^2/h)$

 Speeds may vary based on print mode and media profiles

Note that when printing in CMYK only modes, the XC-540MT achieves the same productivity as the original XC-540, a range of 30-441 sfph (2.8-41m2/h). In White ink modes, the XC-540MT prints at 5.4-14 sfph $(0.5-1.3m^2/h)$.

Q. What XC-540MT print modes are available when printing Metallic Silver ink?

A. Printing modes vary based on the application requirements for white or transparent media.

Standard media modes	Transparent media modes
CMYKMt (v)	CMYKMt (v)
MetallicSilver (v)	MetallicSilver (v)
-	CMYKMt (v) onWhite
-	CMYKMt (v) underWhite
-	White - > CMYKMt (v)
-	CMYKMt - > White (v)

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Q. What is the highest resolution I can achieve using Metallic Silver ECO-SOL MAX ink?

A.   When using the Metallic Silver ECO-SOL MAX ink on the XC-540MT, the resolution is preset to High Quality at 720x1440dpi.

Q. How many print heads does the Metallic Silver ink occupy?

A. The XC-540MT has one print head dedicated to Metallic Silver ink. Given the high density and opacity of the ink, this is more than adequate for high quality metallic silver printing.

Q. Does the XC-540MT have new profiles for Metallic Silver printing?

A. Yes, the XC-540MT has new profiles required for the Metallic Silver ink configuration. Metallic Silver ink profiles will be available through VersaWorks online updates. The XC-540MT ships with Roland VersaWorks 3.3.

Q. Are additional heaters necessary when printing with Metallic Slver ink?

A. The XC-540MT includes three heaters (Pre, Print and Post). The DU-540 dryer/blower is also included standard to expedite drying of the ink and media.

Q. What is the dry time of Metallic Silver ink?

A. The recommended dry time setting in VersaWorks is 15 minutes for Metallic Silver and White to ensure optimum performance. The actual dry time for the Metallic Silver ECO-SOL MAX ink can vary. It is media dependent and also affected by the image area and ink density. Uncoated media has a tendency to dry slower than coated media. XC-540MT users who also print with White ECO-SOL MAX ink need additional dry time beyond what is generally required for CMYK ink only. We recommend using the DU-540 dryer/blower for best results.

Q. Are there any other special steps or precautions when working with the Metallic Silver ink?

A. The pigment particles in Metallic Silver and White inks will tend to settle in the cartridge and ink flow system. It's important to remember to shake the cartridge before each use. The XC-540MT requires using the DU-540 heater and blower unit depending on the media. Outdoor durability is three years for CMYK inks, one year for White ink, and one to three years for Metallic Silver ink, depending on the media used. Roland strongly recommends lamination for both indoor and outdoor graphics to prevent the Metallic Silver ink from scratching.

Q. What type of maintenance does the XC-540MT require when running Metallic Silver ink?

A. As with all Roland printers and printer/cutters, the XC-540MT is very low maintenance and designed to run continuously as a production machine.   However, due to the unique characteristics of metallic silver and white ink, additional care is required. The pigments in Metallic silver and White tend to cause the ink to settle in the cartridges, making it necessary to agitate the metallic silver and white cartridges before installing in the printer and once a day before use.

The XC-540MT includes two firmware-controlled maintenance routines to ensure proper operation. When the printer is ON, the automatic maintenance message **[CIRCULATING INK]** will be displayed on the control panel and ink circulation will occur every 12 hours. If the printer has been idle for 6 hours or more and receives a Metallic Silver or White print job, then it will display: **[INK DISCHARGING]**.

A normal ink circulation cycle will utilize roughly 1.5 ml total of metallic silver and white ink. A normal ink discharge uses approximately 13 ml of metallic silver and white ink combined.

Under normal circumstances when the XC-540MT is printing mostly standard CMYK jobs for several days or weeks in a row, it will not initiate the ink discharge cycles until a Metallic Silver or White ink job is processed. The XC-540MT works as efficiently as possible to control ink costs.

The new XC-540MT incorporates an innovative Intelligent Ink Circulation System that greatly reduces the amount of ink discharged as waste and optimizes ink usage for continuous trouble-free operation.

Q. How does the new Intelligent Ink Circulation System on the XC-540MT work?
A. Consisting of a control system and additional pump for metallic silver and white ink lines, this innovative system circulates the metallic silver and white inks every 12 hours to prevent the settling of pigments in the lines. In addition, this system controls the discharge of metallic silver and white ink and minimizes waste by monitoring the metallic silver and white ink usage and the type of jobs that are printed. A normal ink circulation uses 1.5ml total for Metallic silver and white. A normal ink discharge uses approximately 13 ml of metallic silver and white ink combined.

An ink discharge cycle will not be executed unless all following conditions are met: (1) the printer receives a job with metallic silver or white data, (2) between 6 hours to 72 hours or longer has passed since the last ink discharge.

Elapsed Time	0 to 6 hours	6 to 72 hours	More than 72 hours
Total Ink Consumption	0 ml	13 ml	17ml

As a result, XC-540MT users will typically see a reduction of about 84% in white ink waste when compared with the XC-540W.

Q. Will the Metallic Silver ink need special ventilation?

A. No. Roland's Metallic Silver ink is part of the ECO-SOL MAX family and special ventilation is not required. Metallic Silver is virtually odorless which makes the ink very easy to handle.

Q. What is the shelf life for the Metallic Silver ink?

A. The shelf life for Metallic Silver ECO-SOL MAX ink is two years.