

## MS31 Eco-Solvent Ink Data Sheet

Mutoh's VJ-MS31 (hereinafter MS31) ink is a fourth generation, Eco-Solvent ink. It features a wide color gamut, improved dot gain in high density areas, and excellent weather, abrasion and chemical resistance. **The MS31 ink has less nozzle clogging due to high ink resolvability, providing for easy maintenance.**



### MS31 Product Features & Improvements Over Eco-Ultra Ink

- **Achieves a wide color gamut**
- **Improved dot gain in high density areas**
- **Excellent weather resistance (more than 3 years without lamination), abrasion resistance, chemical resistance**
- **User-friendly, efficient large capacity 220ml and 440ml cartridges and 1000ml ink bags**
- **Easy weekly maintenance procedure**
- **GREENGUARD Gold Certified**
- **7-color (CMYK+Light Cyan+Light Magenta+Light Black) printing to achieve smooth gradients with less graininess**
- **2 years shelf life (24 months from the date manufactured)**

### Printer compatibility

**Mutoh MS31 ink is a direct replacement for Eco-Ultra ink.** MS31 ink can be used immediately after Eco-Ultra ink becomes empty, because they can be used in mixture. There is no need to discharge ink or clean the ink route. Additionally, there is also no need to update the firmware because the ink cartridge smart chip is compatible.

### Printing on substrates

MS31 ink can be printed on both non-coated and coated substrates dedicated for Eco-solvent ink. It is suitable for indoor and outdoor signage, trade show graphics, windows display, POP, banner, vehicle wrapping and more.

### Initial ink charging

- Fill the printer with MS31 cleaner to flush the ink lines, then discharge cleaner from the printer.
  - Fill the printer with MS31 ink.
- Instructions to insert and remove ink/cleaner bag are displayed on the operation panel of the printer. The ink charging/discharging operation is performed automatically.

### Handling and storage

Keep the ink bag and waste ink away from fire, flammable materials and heat. Keep them in a cool, dark and well-ventilated area.

Maximum stacking for shipping box: 6 cartons high.

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### Ink durability testing



For heavy-duty applications where mechanical stress is involved, such as floor and vehicle graphics, lamination is required. Stabilization is required prior to lamination.

Ink Durability	MS31 Ink	Eco-Ultra Ink
Outdoor Durability	**** More than 3 years ΔE<10: Even 2000h (5y)	**** More than 3 years ΔE<10: Even 1800h (4.5y)
Odor	***	***
Color Gamut	***	***
Drying Property	****	***
Abrasion Resistance	***	***
Chemical Resistance	****	***
Mottling	*****	***
Maintenance	****	****

\* Disadvantage and needs to take appropriate action | \*\* Disadvantage but meets evaluation criteria  
 \*\*\* Good | \*\*\*\* Advantage | \*\*\*\*\* Advantage and selling point

### Ink environment

At all times Safety Data Sheets (SDS) of Mutoh inks can be downloaded from:  
<https://www.mutoh.co.jp/support/sds/index.html#sds01>

Environment	C, M, Y, K, LC, LM, LK and cleaner
Hazardous Mark	C, M, Y, K, LC, LM, LK:  and cleaner 
Operating Environment	86 to 89.6°F (20 to 32°C)   40 to 60% Relative Humidity   Non-condensing
Shelf Life	24 months from date of manufacture
Storage Condition	-4 to 104°F (-20 to 40°C) Keep the product in a cool, dark, well-ventilated area. Keep away from flammable materials or heat sources.
Shipment Condition	-4 to 122°F (-20 to 50°C) Shipment under 104°F/40°C should occur within one month; shipment under 122°F/50°C should be within 120 hours. If the temperatures exceed conditions above, use a climate-controlled container.

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### MS31 Ink Pricing

The MSRP for the MS31 220ml and 440ml ink cartridges will remain the same as the Eco-Ultra 220ml and 440ml inks; however there will be a **price drop for the 1000ml packs from MSRP \$250 to \$185.**

Quantity	Item Number	Item Description	MSRP
220ml Carts	VJ-MS31-BK220U	MS31 ECO SOLVENT BLACK 220ML	\$ 69.99
	VJ-MS31-CY220U	MS31 ECO SOLVENT CYAN 220ML	\$ 69.99
	VJ-MS31-MA220U	MS31 ECO SOLVENT MAGENTA 220ML	\$ 69.99
	VJ-MS31-YE220U	MS31 ECO SOLVENT YELLOW 220ML	\$ 69.99
	VJ-MS31-LC220U	MS31 ECO SOLVENT LIGHT CYAN 220ML	\$ 69.99
	VJ-MS31-LM220U	MS31 ECO SOLVENT LIGHT MAGENTA 220ML	\$ 69.99
	VJ-MS31-LK220U	MS31 ECO SOLVENT LIGHT BLACK 220ML	\$ 69.99
	VJ-MS31-WH220U	MS31 ECO SOLVENT WHITE 220ML	\$ 99.99
	VJ-MS31-MT220U	MS31 ECO SOLVENT METALLIC 220ML	\$ 249.99
	VJ-MS31-CL220U	MS31 ECO SOLVENT CLEANING 220ML	\$ 36.99
440ml Carts	VJ-MS31-BK440U	MS31 ECO SOLVENT BLACK 440ML	\$ 128.99
	VJ-MS31-CY440U	MS31 ECO SOLVENT CYAN 440ML	\$ 128.99
	VJ-MS31-MA440U	MS31 ECO SOLVENT MAGENTA 440ML	\$ 128.99
	VJ-MS31-YE440U	MS31 ECO SOLVENT YELLOW 440ML	\$ 128.99
1000ml Packs	VJ-MS31-BK1000U	MS31 ECO SOLVENT BLACK 1000ML	\$ 185.00
	VJ-MS31-CY1000U	MS31 ECO SOLVENT CYAN 1000ML	\$ 185.00
	VJ-MS31-MA1000U	MS31 ECO SOLVENT MAGENTA 1000ML	\$ 185.00
	VJ-MS31-YE1000U	MS31 ECO SOLVENT YELLOW 1000ML	\$ 185.00
	VJ-MS31-LC1000U	MS31 ECO SOLVENT LIGHT CYAN 1000ML	\$ 185.00
	VJ-MS31-LM1000U	MS31 ECO SOLVENT LIGHT MAGENTA 1000ML	\$ 185.00
	VJ-MS31-LK1000U	MS31 ECO SOLVENT LIGHT BLACK 1000ML	\$ 185.00