



## Multi-Purpose Pad Printing Ink

Developed by pad printers for pad printers

Crafted to the code of pad printing

Sigma Multi-Purpose pad printing ink is specifically formulated for the demands of the pad printing process; with transferability, opacity, adhesion, flexibility, and high wear resistance being its core attributes.

### ***Characteristics:***

Sigma Multi-Purpose ink is a semi-gloss, fast drying ink, and is chemically resistant to oil, grease, ammonia, gasoline and alcohol. To further improve adhesion and other properties, Sigma Multi-Purpose ink can also be used as a 2-component system by adding one of our three catalysts to improve adhesion and other properties.

When used as a single component ink, the ink adheres extremely well to ABS, Acrylics, Polystyrene, Polycarbonate, SAN, PET, Rigid and Flexible PVC, Polypropylene (pretreated), and varnished surfaces.

When used as a two component system (with catalysts), the ink is excellent for Nylon, Polyurethane, Powder coated and Anodized surfaces, Glass, pretreated Polypropylene, pretreated Polyethylene, and POM's such as Delrin\*. When catalyzed, the ink has a pot life of 8 hours.

\*pretreat and post bake.

### ***Applications:***

Sigma Multi-Purpose inks are currently being used in Automotive, Ad Specialty, Cosmetic packaging, Electronic component, Electrical appliance, Eye wear, Defense, Garment, Hand tool, Medical device, Sporting goods and Toy industries.

### ***Advantage:***

Sigma Multi-Purpose inks' unique chemistry offers the end user extended run time with less "in process" maintenance (compared to many other inks) thereby reducing thinner usage and VOC emissions. The advantages include savings in time and materials as well as a smaller footprint on our environment.

### ***Color system:***

Sigma's color offering includes the following:

- 12 Mixing colors including Black, White, and Clear
- 11 Extra opaque colors including Black and White
- Metallic colors
- CMYK process colors

### ***Additives:***

- Normal Thinner (MP 102)
- Fast Thinner (MP 103)
- Retarder (MP 101)
- Normal Catalyst Hardener (MP 200)
- Glass Hardener (MP 201)
- Hardener (MP 203)
- Adhesion Promoter (MP 202)



### ***Sigma Multi-Purpose ink conforms to the following regulations:***

- **Class VI Approved Medical Grade:** USP Class VI Certified, In Vitro & In Vivo
- **MIL SPEC:** A-A-208 B TYPE I & II, as well as approved Federal Standard 595 Colors
- **Phthalate Free:** Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 (formerly known as Directive 2005/84/EC)
- **RoHS Compliant:** free of Lead, Cadmium, Mercury, Hex-CR, PBB, PBDE-fire retardant
- **REACH Compliant:** free of SVHC, as listed by ECHA
- **EN 71-3:** International Toy Safety standard regarding the use of toxic chemicals

### ***Custom color matching service:***

As a service, Sigma will custom match to Pantone®, RAL, Federal Standard, or sample color chips.



# SIGMA Multi-Purpose Series Ink and Additive Usage Guide

	Single Component	MP200 Hardener (10% by wt.)	MP201 Glass Hardener (10% by wt.)	MP202 Adhesion Promoter (10% by wt.)	MP203 (5% by wt.) *Shortens pot life of the ink *and life of the pad	Pretreat (Corona of Flame)	Low Temperature Bake 175° - 20 min.)	High Temperature Bake 300° - 20 min.)
ABS/SAN	•							
Acrylic Glass (PMMA)	•							
Anodized Aluminium		•		•				
Glass, Ceramics and Chrome			•		• <sup>1</sup>		•	
Metals		•						
PETG, PETA	•							
POM (Delrin)		•				•		•
Polyamide (Nylon, Kevlar)		•						
Polycarbonate	•							
Polyester	•			•				
Polyethylene, Pre-treated	•			•		•		
Polypropylene, Pre-treated	•					•		
Polyurethane		•						
Polystyrene	•							
Powder Coated Surfaces		•						
PVC, Rigid	•							
PVC, Flexible	•							
Phenolic			•		• <sup>1</sup>			
Textiles, Cotton	•							
Textiles, Synthetics	•							
Varnished Surfaces	•							
Paper, Corrugated Board	•							
Wood	•							

## Legend & Notes:

• Recommended

<sup>1</sup>) MP 203 offers maximum durability but will shorten the pot life of the ink and life of the pad.

**Catalysts:** Ink hardeners and adhesion promoter must be mixed into the pre-measured ink supply before thinning.

**Thinning:** Adjust viscosity by using MP102 Thinner to 15-30% by weight of ink, depending on application.

**Ink Speed:** Speed of the ink can be further adjusted by using MP103 Fast Thinner or MP101 Retarder.

# Mixing Colors

MP-M-10  
MIXING BLACK



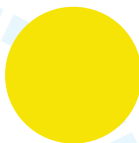
MP-M-20  
MIXING WHITE



MP-M-30  
MIXING  
WARM YELLOW



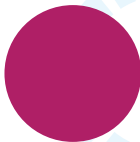
MP-M-31  
MIXING YELLOW



MP-M-40  
MIXING ORANGE



MP-M-50  
MIXING PINK



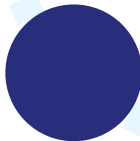
MP-M-51  
MIXING RED



MP-M-52  
MIXING  
SCARLET RED



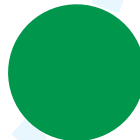
MP-M-70  
MIXING VIOLET



MP-M-80  
MIXING BLUE



MP-M-90  
MIXING GREEN



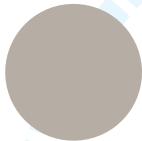
**SIGMA<sup>®</sup>**

# Opaque Colors

MP-310  
BLACK EO



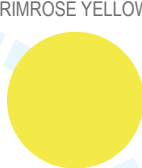
MP311  
LIGHT GRAY EO



MP-320  
WHITE EO



MP-330  
PRIMROSE YELLOW EO



MP-331  
RICH YELLOW EO



MP-340  
ORANGE EO



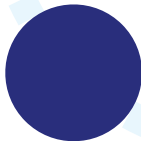
MP-350  
FIRE RED EO



MP-351  
RED EO



MP-380  
REFLEX BLUE EO



MP-381  
BLUE EO



MP-390  
GREEN EO

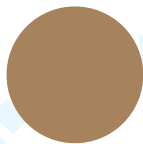


**SIGMA®**

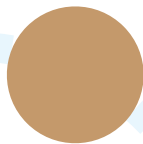
# Metallic Colors



MP-300  
METALLIC SILVER



MP-305  
RICH  
METALLIC GOLD



MP-306  
BRIGHT  
METALLIC GOLD



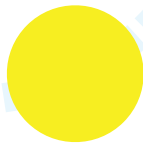
MP-307  
PALE  
METALLIC GOLD



MP-P CYAN  
PROCESS CYAN



MP-P MAGENTA  
PROCESS MAGENTA



MP-P YELLOW  
PROCESS YELLOW



MP-P BLACK  
PROCESS BLACK

# CMYK Colors

**SIGMA<sup>®</sup>**

# **SIGMA<sup>®</sup>**



## **SIGMA Multi Purpose Ink**

Sigma Multi Purpose ink is available in one quart, 16 ounce and 8 ounce containers.

This applies to all standard colors and custom blended colors.



## **MP-102 Thinner**

Sigma MP-102 Thinner is available in one quart or one gallon containers.



## **MP-103 Thinner**

Sigma MP-103 Thinner is available in one quart or one gallon containers.



## **MP-101 Retarder**

Sigma MP 101 Retarder is available in one quart and one gallon containers.

# **SIGMA<sup>®</sup>**



## **MP-200 Hardener**

Sigma MP 200 Hardener is available in 4 ounce, 16 ounce and one quart containers.



## **MP-201 Glass Hardener**

Sigma MP 201 Glass Harder is available in 4 ounce, 16 ounce and one quart containers.



## **MP-202 Adhesion Promoter**

Sigma MP 202 Adhesion Promotor is available in 4 ounce, 16 ounce and one quart containers.



## **MP-203 Hardener**

Sigma MP 203 hardener is available in 4 ounce, 16 ounce and one quart containers.