

Product: Monocat™

Series: C91

DESCRIPTION: C91 Monocat is a single-package screen ink formulated specifically for use on pre-treated polyethylene and polypropylene containers. Monocat has excellent gloss, flexibility, screen stability and product resistance.

C91 SERIES SUBSTRATES & APPLICATIONS:

C91 Monocat is especially recommended for use on pre-treated polyethylene and polypropylene containers, but may also be used on some metal surfaces for its toughness and solvent resistance. Monocat is not suitable for outdoor use.

NOTE: Pretest all substrates prior to use in production.

RESISTANCE PROPERTIES:

When fully cured, C91 Monocat is resistant to most household and cosmetic products, detergents, motor oils and common solvents. Monocat is not resistant to bleach.

DRYING & CURING:

C91 Monocat dries by solvent evaporation, followed by chemical curing. Prints will be tack-free and able to be handled after approximately 1-2 minutes @175°F (80°C); however, prints will not be fully cured or product resistant at this stage. Full chemical curing and product resistance requires either an additional 4-5 minutes @175°F (80°C) or 5-7 days air drying at ambient temperature or an equivalent schedule combining elevated temperature with subsequent air drying.

COVERAGE:

Using a 255/inch (100/cm) mesh, one gallon of C91 Monocat will cover approximately 1,200 square feet.

SUBSTRATE PRE-TREATMENT:

It is essential that polyethylene or polypropylene substrates are pre-treated before printing. These substrates are chemically inert and have a very low surface tension. Only by "activating" the surface can adhesion of any coating be achieved.

Pre-treatment of polyethylene/polypropylene containers is usually accomplished by briefly exposing (<1 second) the surface to a flame, preferably immediately prior to printing.

Pre-treatment of polyethylene/polypropylene surfaces may be assessed by their degree of wetting with calibrated surface-tension solutions. For best results, a surface tension in excess of 46 dynes/cm. is recommended.

MODIFICATION:

For best results, C91 Monocat may be reduced with 10-20% by weight of ST-291 Reducer. For exceptionally fine detail printing, or under adverse ambient conditions, either ET-12 Retarder or GEL-100 Gelled Retarder may be substituted for all or part of the reducer. The restricted flow of GEL-100 allows better print definition, particularly for reverse detail or 4-color process printing.

NOTE: The use of ET-12 Retarder or GEL-100 Gelled Retarder may decrease drying speed; ensure that drying is adequate before commencing a full production run.

For accelerated curing, 2-5% by weight of ST-260 Cure Accelerator may be added to C91 Monocat. Excessive addition will adversely affect final resistance properties.

NOTE: The addition of ST-260 Cure Accelerator results in a pot-life of 24 hours, after which the ink should not be used.

SCREEN MESH: Typically 255-305/inch (100-120/cm) mesh. Nylon mesh may be used where its greater elongation allows better conformation to curved container surfaces. **Sun Chemical has the mesh best suited for your particular printing requirements. Contact your local Sun representative for details.**

STENCIL: Direct photoemulsion, capillary film or other solvent resistant stencil.

SQUEEGEE: Medium to hard durometer urethane squeegee. **Sun Chemical has the best squeegee for your particular application. Contact your local Sun representative for recommendations.**

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WASH UP:

C91 Monocat may be cleaned from screens and processing equipment with ST-291 Reducer, ET-12 Retarder or other suitable screen wash. However, if Monocat is allowed to fully cure, its inherent solvent resistance may make it impossible to remove. **Sun Chemical has a variety of wash-ups including ECO friendly screen washes available for your particular needs. Contact us for *all* of your pre and post-press chemical requirements.**

STORAGE:

When stored at temperatures between 40-90°F (5-32°C), C91 Monocat has a shelf-life of 12 months.

HEALTH AND SAFETY:

As with all inks, gloves and safety goggles should be used when handling this product. For more complete information, refer to the relevant **Material Safety Data Sheet**.

In accordance with information received from suppliers, the full C91 series is formulated without heavy metals and complies with: 16 CFR, Part 1303; ANSI Z66.1-1964; ASTM F 963; CONEG packaging regulations; EC Packaging Waste Directive EC/94/62; EN71, section 3; RoHS 2002/95/EC; WEEE 2002/96/EC; E2003/11/EC.

ColorPlus® Standard Colors:		ColorPlus® Monopigmented Colors	
C91-S110	Primrose Yellow	C91-M111	GS Yellow
C91-S112	Lemon Yellow	C91-M115	RS Yellow
C91-S116	Medium Yellow	C91-M119	Orange
C91-S120	Warm Red	C91-M121	YS Red
C91-S122	Fire Red	C91-M125	BS Red
C91-S126	Bright Red	C91-M149	BS Green
C91-S128	Dark Red	C91-M155	RS Blue
C91-S142	Emerald Green	C91-M159	GS Blue
C91-S144	Medium Green	C91-M181	Cerise
C91-S150	Dark Blue	C91-M183	Magenta
C91-S158	Light Blue	C91-M185	Violet
C91-S159	GS Blue		
C91-S180	Opaque Cerise	Modifiers:	
C91-S182	Fuchsia	ET-12	Retarder
C91-S103	Opaque White	GEL-100	Gelled Retarder
C91-S105	Blending White	ST-260	Cure Accelerator
C91-S170	Blending Black	ST-291	Reducer
C91-S199	Mixing Clear		

All information on this data sheet is based on Sun Chemical laboratory tests and experience in print shops. Procedures and directions for use of Sun Chemical products (including printing and after-treatment) must be considered as recommendations only, with no warranties expressed or implied. The user of the products described herein is solely responsible for determining suitability of any Sun Chemical product for the particular application. Sun Chemical recommends that all products be pre-tested prior to full-scale production use. This data sheet supersedes all previous publications. Nov. 2008