

# Product: Gloss Vinyl

## Series: C99™

**DESCRIPTION:** C99 Gloss Vinyl is a high gloss, flexible ink with excellent outdoor durability.

**SUBSTRATES AND APPLICATIONS:** C99 Gloss Vinyl may be screen printed onto pressure-sensitive vinyl, rigid vinyl, static-cling vinyl, surface-treated polyester, polycarbonate and acrylic substrates. It is not suitable for use on styrene substrates. C99 Gloss Vinyl has excellent adhesion to vinyl, acrylic and polycarbonate substrates, combined with exceptional flexibility. It is therefore particularly suitable for "double-sided", multi-layer prints on vinyl decals, prints which need to withstand forming/embossing and large format displays on rigid plastics.

**NOTE:** Pretest all substrates prior to use in production.

**EXTERIOR DURABILITY:** C99 Gloss Vinyl is formulated to withstand exterior exposure of 3-5 years<sup>1</sup> when properly printed and applied. For best results, it is advisable to print C99 Gloss Vinyl at the highest practical ink deposit onto premium exterior-use pressure-sensitive materials.

<sup>1</sup>-Based on accelerated weathering tests simulating exposure to Northern USA and Middle European temperate climates.

For advice on maximizing exterior durability of light or pastel colors, contact your local Sun Chemical representative.

**DRYING:** Air dries in 20-30 minutes; jet dries in 20-30 seconds at 150°F (65°C). As with all solvent-based inks, overprint layers may require slightly longer.

**SCREEN MESH:** Typically 255-305/inch (100-120/cm) mesh. Finer meshes may be used for 4-Color Process printing. **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.**

**PROCESS COLORS:** Unless specific properties of C99 Gloss Vinyl inks are essential, C70 Multigrip Process Colors are recommended for 4-color process printing. C70 Multigrip Process Colors have excellent screen stability and dot definition, and match the SWOP standards. Color density may be adjusted by adding C70-S139 Process Base. (See C70 Product Data Sheet).

### MODIFICATION:

**1. Viscosity Reduction:** For best results, C99 Gloss Vinyl may be reduced with approximately 15-30% by weight of ET-10 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.

**2. Gloss Reduction:** Up to 20% by weight of Matte Additive MAT-190 may be used to reduce gloss. A 10% addition of MAT-190 allows a satin finish, whereas a 20% addition allows a less reflective, more matte finish.

**NOTE:** As with all inks, decreasing gloss may render prints more susceptible to slight surface scuffing.

**OVERPRINTING:** For decorative applications, or when exterior durability is not required, C99-S199 Mixing Clear may be used to overprint C99 Gloss Vinyl colors.

For maximum exterior durability, OPC-190 Overprint Clear is recommended. OPC-190 is specially formulated for use only as an overprint clear. If required, OPC-190 may be reduced with 5-15% by weight of ST-280 Overprint Clear Reducer.

**NOTE:** Pretest OPC-190 prior to use in production.

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**COVERAGE:** Using a 230-305/inch (90-120/cm) mesh, one gallon of C99 Gloss Vinyl will cover approximately 1,500 square feet.

**WASH-UP:** C99 Gloss Vinyl may be cleaned from screens and processing equipment with any suitable screen wash, such as VL Wash. 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.

**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 C99 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.

<b>ColorPlus® Blending Colors:</b>		<b>Process Colors:</b>	
C99-Y30	GS Yellow	The following C70 Multigrip Process Colors are recommended. See prior section on Process Colors.	
C99-Y50	RS Yellow		
C99-O50	Orange		
C99-M121	YS Red	C70-S131	Process Yellow
C99-M125	BS Red	C70-S135	Process Cyan
C99-M141	YS Green	C70-S139	Process Base
C99-M149	BS Green	C70-S140	Process Magenta
C99-M155	RS Blue	C70-S171	Process Black
C99-M159	GS Blue		
C99-M181	Cerise	<b>Modifiers:</b>	
C99-M183	Magenta	MAT-190	Matte Additive
C99-M185	Violet	ET-10	Reducer
<b>Standard Products:</b>		ET-12	Retarder
C99-S103	Opaque White	GEL-100	Gelled Retarder
C99-S105	Standard White	ST-280	Overprint Clear Reducer
C99-S170	Opaque Black		
C99-S199	Mixing Clear		
OPC-190	Overprint 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