



# 3M™ Screen Printing Ink Series 1900

## Description

Screen Printing Ink Series 1900 are high performance fast drying inks formulated for use on selected Controltac™ Plus, Scotchcal films and Scotchlite™ reflective films. These inks were developed to give superior exterior performance on difficult application surfaces, including corrugated and riveted surfaces. In order to obtain these superior properties, ink series 1900 should be dried in a conveyor dryer. When printed onto 3M™ Controltac™ Plus Graphic Marking Film Series 190 curtain-sided vehicle film, these inks must be conveyor dried.

Scotchcal Screen Printing Ink Series 1900 screen printing inks consist of line, 4-colour inks and metallic pastes. They are an integral part of a Matched Component System (MCS™) warranty where the approved Controltac Plus, Scotchcal films and Scotchlite™ reflective sheetings, inks, overprint clear and application tapes SCPM-19 and SCPS-100 constitute a total compatible package. All customers must receive training from 3M on usage of process equipment and inks before ordering and screen printing Scotchcal 1900 series inks.

1952	Transparent Red Shade Yellow
1955ABC	Petrol Resistant Overprint clear
1967	Magenta
1970	Red Shade Blue
1971	Deep Red
1972	Transparent Green Shade Yellow

Note: All inks are lead-free except 1902, 1912 and 1933

Scotchcal Screen Printing Ink Series 1900 4-colour half tone inks	
1990	Yellow Halftone Ink Concentrate
1991	Magenta Halftone Ink Concentrate
1995	Black Halftone Ink Concentrate
1996	Cyan Halftone Ink Concentrate
1997	Standard Halftone Base
1998	Retarder Halftone Base

Clears, Thinners, Premask and Prespace Tapes	
Overprint Clear	1920 DR High Gloss 1930 Matte
Thinners for inks & clears	CGS-30/50/80
Premasking	SCPM-19
Prespacing	SCPS-100

Petrol resistant clear	1955 ABC See IB3.12.2
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**Note:** The higher the CGS number, the slower the evaporation rate.

3M™ Matte Overprint Clear 1930 and Overprint clear 1955 cannot be used for 3M™ Controltac™ Plus Curtain-Sided Vehicle Graphic Film 190 and 3M™ Scotchcal™ Contour Film Series 1100.

1900 series metallic pastes	
1960	Small Aluminium Flake
1961	Medium Aluminium Flake

## Available Products

Scotchcal Screen Printing Ink Series 1900 Line Colour	
1902	Red Shade Yellow
1903	White
1905	Black
1910	Gloss Toner/Reducer
1912	Green Shade Yellow
1913	Yellow Shade Orange
1914	Dark Green
1916	Green Shade Blue
1918	Yellow Shade Red
1920DR	Dirt Resistant Overprint Clear
1924	Light Green
1927	Blue Violet
1930	Matt Overprint Clear
1932	Lemon Yellow
1933	Orange
1937	Red Violet

## Scotchlite™ Reflective Graphic Films

3M™ Screen Printing Ink Series 1900 can be used with Scotchlite films; however, most of the inks are opaque and will appear black at night. Use 3M™ Scotchlite™ Transparent Screen Printing Ink Series 2900, which is a transparent ink, as an alternative.

## Screen Printing

For ink preparation and screen printing details see Instruction Bulletins 3.11 and 3.12.

## Coverage

### Coverage Line Inks

The coverage of thinned inks will vary with the screen mesh used; however, coverage of 30–40 sqm per litre can be expected.

### Coverage 4-Colour Inks

The coverage of inks applied as recommended, will be approximately 45 sqm/litre with 100% dot coverage.

### Coverage Clear Coat

One litre of unthinned overprint clear will cover approximately 60 sqm when thinned to print viscosity, and printed through a 90T screen. Use of less than recommended usage of overprint clear can result in shortened durability.

## Metallic Pastes

The 1900 series metallic pastes are offered as part of a Matched Component System (MCS™) which consists of the following:

### Coverage Metallic Inks

The coverage of thinned inks will vary with the screen mesh used; however, coverage of 30–40 sqm/litre can be expected.

### Processing Metallic Inks

Gold and silver metallic inks can be made by the addition of metallic pastes. The larger the flake used, the more sparkle it imparts to the inks. Inks to be used in matching gold and silver metallic inks include transparent yellows 1952 and 1972 along with reds (1918, 1937, and 1971), blues (1916, 1927, and 1970), green (1914) and black (1905).

It is not recommended to use more than 12% aluminium flake by weight in a formulation prior to thinning. However, when printing onto Controltac Plus 190 film it is recommended to use no more than 8% flake by weight.

## Shelf Life of Flakes

### Important Note!

Metallic flakes require special handling. Exposure to air causes them to deteriorate and agglomerate. This will cause printing problems. We recommend buying only what can be used in a short period of time

## Warranty

The warranty given by 3M depends on the screen printing ink/film combination. Detailed warranty information is listed in the 3M Graphic Warranties matrix.

Listed below are the maximum warranties (years) given for Scotchcal Screen Printing Ink Series 1900:

	Zone 1	Zone 2	Zone 3
Line Ink	8	6	4
4-Colour Ink	6	5	4

Zone 1 = Northern & Central Europe

Zone 2 = Mediterranean Europe

Zone 3 = Middle East and Northern Africa

- Metallic inks are not warranted for more than 5 years in Zone 1.
- 3M™ Scotchcal™ Matte Overprint Clear 1930 has a maximum warranty of 3 years.

Performance is based upon field experience and exposure tests conducted throughout Europe and the United States. Performance can be affected by substrate selection and preparation, exposure conditions and maintenance of the marking.

When printed and applied in accordance with 3M recommended procedures, performance life is subject to the following qualifications.

- Markings are warranted against fading, cracking, peeling, lifting or discoloration due to natural weathering.
- Markings are not warranted against ink or overprint clear removal, base film damage or lifting, or staining caused by or the use of non-approved cleaning methods, solutions or solvents or excessive abrasion.
- Changes in appearance caused by bird deposits, insect secretions and dirt are not covered under this warranty.

- Markings are not warranted if applied to unsound surfaces or to surfaces which subsequently crack, peel, outgas or become damaged beneath the marking.
- Markings fabricated with non-3M materials are not warranted.

## Premasking / Prespacing

Conditions	3M Application Tapes
General Premasking	SCPM-19
General Prespacing	SCPS-100

## Storage

Inks should be stored at temperatures between 21°C and 32°C (70-90°F) and used within one year of the date of purchase.

## 3M Related Literature

Listed below is related 3M technical literature that may be of interest. Contact your local 3M sales or technical representative to order these bulletins.

Subject	Instruction Bulletin
Screen printing with 3M™ Screen Printing Ink Series 1900 Line Colour	3.12
Screen printing with 3M™ Screen Printing Ink Series 1900 Four Colour	3.11
Preparation for 4-colour printing	1.1
3M™ overprint clear and Edge Sealer Series 1955ABC	3.12.2
Scoring and Cutting	4.1
Premasking and Prespacing	4.3
Surface Preparation	5.1
Storage, Maintenance and Film Removal	6.5
Application	5.4, 5.5, 5.12
3M Graphic Warranties matrix	-

## Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

## Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

## Technical Assistance

For help on specific questions relating to 3M Commercial Graphics Division Products, contact your local Technical Service Representative.

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## Sales Assistance

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