



## Rub Removable Inks

### RUB REMOVABLE RR – RUB REMOVABLE RX

A range of opaque 'scratch off' inks which can be either printed over offset litho printed lottery tickets or printed using continuous web, rotary screen printing machinery.

#### Rub Removable Ink Selection Table

	General Purpose Products		Specialist Products	
	RR486	RR482	RR462	
Supplied at printing viscosity	No	No	No	
Ease of removability	E	F	F	
Suitability for use over:				
Offset Litho Varnish	E	N	N	
UV Varnish (UV390)	N	E	N	
Litho overprintability (surface hardness)	G	E	F	
Residual odour of print	E	F	F	
Ink odour during printing	E	F	F	
Opacity	E	G	F	

E = Excellent G = Good F = Fair N = Not recommended

#### Substrates

Rub Removable RR inks are normally printed over offset prints on board which itself must be suitably opaque. Absorbent stocks should be avoided as removability of the inks may be impaired. Absorbent board may be used if it is sealed with either a litho or screen varnish.

The substrate should always be varnished prior to the application of Rub Removable RX ink. This may be achieved by in-line printing of a rotary screen or offset varnish.

#### Screen Varnish:

UV390 Uvibond Varnish is recommended if a UV curing screen printable release coat is required. UV390 should be thinned as necessary with ZE637 Thinner. For high speed printing, thin with ZE813 Fast Thinner.

#### Offset Varnish:

The offset ink and, where appropriate, varnish, must be thoroughly dried prior to the application of Rub Removable RX ink. Printed reels should either be allowed to stand until fully dried or in-line infra-red curing of the offset ink and varnish should be used.

#### Offset Printing and Board Sealing

Offset litho inks are normally used to print the lottery ticket and numbers. Such prints should be left to set for 2-3 days before the Rub Removable RR ink is printed.

Ideally prints should be sealed with a coat of varnish before being overprinted with Rub Removable ink. This may be a litho varnish or a screen varnish such as RR383 Rub Removable RR Varnish.

### Main Characteristics

#### Finish

Satin opaque

#### Drying

**Rub Removable RR:** Jet drying: 55-65°C, 20 seconds. Air drying: 10-15 minutes.

**Rub Removable RX:** Must be carried out immediately after printing by jet air or infra-red with air circulation.

#### Thinning & Wash-up

**Rub Removable RR:** 10-15% ZC521. For hot shop conditions use ZC529. Wash up with ZC521, Screen Wash Universal, Actisol Superjet Screen Spray.

**Rub Removable RX:** 5-10% ZC521.

For optimum results viscosity should be measured and adjusted to 8-10 Poise (8-10 dPa.sec) at room temperature.

For fine detail and slow speed use ZC529.

Wash-up with ZC521 or Screen Wash Universal.

#### Mesh

**Rub Removable RR:** 62-77 monofilament. 35m<sup>2</sup>/kg.

**Rub Removable RX:** 125 hole/inch (50 hole/cm) screens with a 15-20% open area.

#### Stencil Type

**Rub Removable RR:** Any type except solvent adhering film and Stenplex Amber.

*Recommend:* Dirasol 902, Dirasol 916

**Rub Removable RX:** Solvent resistant direct emulsions.

*Recommend:* Dirasol 916

#### Colour Range

**Rub Removable RR:** 3 silvers and a gold.

**Rub Removable RX:** 1 gold.

#### Properties

When printed over, offset printed lottery tickets may be readily removed with a coin or fingernail. Suitable for promotional and high security products. Combines ease of removability with a resilient, scuff resistant opaque finish.

#### Substrates

Most types of paper and board may be successfully printed though more absorbent stocks should be avoided. Substrates used in the production of lottery tickets and other high security products should themselves be opaque. It is strongly recommended that an aluminium faced board is used for this type of work.

#### Overprinting

Rub Removable RR may be overprinted. Where this is a requirement, Colorstar CS is the recommended ink. (See Information Sheet 'Colorstar CS Screen Inks').

#### IMPORTANT:

**Stir well before every use. Always ensure that offset prints are thoroughly dry before overprinting with Rub Removable RR inks, as incompletely dried prints can impair the removability of the inks. Ensure, prior to commencing a production run, that all components, i.e. board, inks and varnish, are fully compatible.**

## Storage of Prints

Prints on suitable materials will remain readily removable for at least one year after printing, providing prints are stored in a cool place away from direct sunlight.

## Colour Range

### Rub Removable RR:

RR486	Silver 486
RR482	Silver 482
RR-462	Silver 462
RR461	Gold

Available in 5 kg containers.

### Rotary Screen Rub Removable RX:

RX461	Gold
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15 and 5 kg containers.

## Solvents

ZC521	Thinner
ZC529	Retarder

Available in 15, 5 and 1 ltr containers.

## Fujifilm Sericol UK Limited

- Has certification to the International Environmental Standard, ISO 14001.
- Is committed to minimising the risk to users of our products, and also to minimising the impact of our activities on the environment, from formulation through to production and supply.
- Research & development team, work to an in house Health, Safety and Environmental policy, termed 'Design for Health, Safety and Environment', with the aim of proactively developing products with the least impact on health, safety and the environment.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

## Safety and Handling

- Both inks are formulated to be free from any (toxic) carcinogenic, mutagenic or reprotoxic chemicals.

### Rub Removable RX:

- Is formulated free from lead and other heavy metals and therefore should comply to the EN71-3: 1995 Toy Safety Standard.

### Rub Removable RR:

- Contains barium and therefore should not be used on objects liable to be sucked or chewed by children, except RR486 which is formulated free from lead and other heavy metals and therefore should comply to the EN71-3: 1995 Toy Safety Standard.

Comprehensive information on the safety and handling of Rub Removable screen inks and solvents is given in the appropriate Sericol Safety Data Sheet, available upon request.

## Environmental Information

### Rub Removable RX and RR:

- Do not contain ozone depleting chemicals as described in the Montreal Convention.

*The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product Information sheet out of date and users are requested to ensure that they follow current recommendations.*

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