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**General information**

One of the remarkable features of the colours of palette „C“ is the special stability during the firing process. Furthermore those colours are highly intense and fine in grain size (d90 value around 12µm). Thermal expansion coefficient is around  $72 \times 10^{-7}/K$ .

The fast-firing is performed in a total firing time of 45 – 120 minutes at temperatures up to 1050 ° C.

**Miscibility**

The colours of the palette „C“ are intermixable among each other.

Pastel tones can be reached by admixing with Mixing-White FL 9147.

Diluting with fluxes FL 9150 or FL 9147 will result in lighter colour tints. Thermal Exp. Coeff. of FL 9147 is  $72 \times 10^{-7}/K$ , FL 9150 is  $77 \times 10^{-7}/K$ .

These fluxes also may be used for over printing the colours (improving the resistance).

The melting point of the colours can be lowered by adding "General Flux I".

The „C“ colours usually fire with a glossy finish.

Matt decorations can be achieved by adding Matt Additive RG 24, ES 9172 or V 577. Depending on the degree of desired mattedness, an addition of 10 – 40 % matt additive is needed, for example:

Colour powder:	80 weight units
Matt Additive RG 24:	20 weight units

Mixing with RG 24 the colours will appear lighter according to the percentage of the mixing proportion.

RG 24 does not effect the resistance of the colours.

**Processing**

„C“ colours are suitable for applications, that provide a thick colour layer, such as:

- direct screen printing
- decal printing
- spraying

<p><b>Please Note:</b>          The information in this leaflet are based on our current knowledge and experience. This description does not release the users from examinations and tests of their own because of uncountable possible influences, when using and applying the products in connection with every other material being involved in the production. It can not be deduced a legally obliged assurance for specific characteristics or for the aptitude of a definite usage purpose. The receiver of our products has to observe by his own responsibility probable protecting rights as well as existing laws, rules and regulations.</p>	<p>Rüger &amp; Günzel GmbH          Dornhofstrasse 71          D 63263 Neu-Isenburg          Tel: +49(0)6102-812940          Fax: +49(0)6102-8129440          E-Mail: <a href="mailto:info@rgfarben.de">info@rgfarben.de</a></p>
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### **Spraying:**

#### 0000/2 Spraying oil

Preparation:

Colour powder: 55 – 65 weight units  
Spraying oil: 45 – 35 weight units

Fine grinding in a ball mill is recommended.

For preparing oily preparations, the colour powder has to be completely dry. Even little moisture having been attracted during storage, will lead to kind of „cheesy“ paste, which can no longer be processed perfectly. We recommend drying of the colour powders at 120 ° C before preparing.

### **Direct Screen Print Process:**

#### 0405 or 0721 Screen printing oil

##### Ratio of pasting:

Colour powder: 70 weight units  
Printing oil: 30 weight units

#### 0551 Screen printing medium, water soluble

##### Ratio of pasting:

Colour powder: 70 weight units  
Printing oil: 30 weight units

#### Recommended fabric, meshcount:

Polyester: 77 – 140 / cm  
Steel: 200 – 350 / inch

choice according to design and colour

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Rüger & Günzel GmbH  
Dornhofstrasse 71  
D 63263 Neu-Isenburg  
Tel: +49(0)6102-812940  
Fax: +49(0)6102-8129440  
E-Mail: [info@rgfarben.de](mailto:info@rgfarben.de)



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### Indirect Screen Print Process (decals)

0721 or 0782, Screen printing oils for transfers, also available in thix versions

#### Ratio of pasting:

Colour powder: approx. 70 weight units  
 Oil: approx. 30 weight units

#### Recommended fabric, meshcount:

Polyester: 77 – 140 / cm  
 Steel : 200 – 350 / inch

choice according to design and colour

#### **Covercoat:**

0601 or 0601 thix (available colourless or yellow, blue, pink or green)

Recommended fabric:

Polyester 30 / cm

#### **Firing**

„C“ colours require a certain minimum temperature, in order to melt up to a homogenous glossy layer.

The firing temperature depends on the factors:

- objects to be decorated (softening point of the glaze),
- thickness of colour layer
- type of kiln

The softer the glazes, the lower the temperature can be adjusted.

A higher temperature is required for the flowing of the enamels at shorter peak times.

A short peak time is best, because in this case the flux will not dissolve the colour particles too much; nevertheless here you should observe a good temperature equalization of the fired goods.

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The temperature of the fired goods is more important than the measured temperature in the kiln chamber.

The faster the heating up and the more densely the fired goods are placed, the bigger is the difference between the temperature of the articles and the temperature of the kiln.

Up to about 450 ° C organic media and cover coats are decomposing and the kiln should exhaust very effective.

### Security Advices

Ceramic colours are chemical products. For processing them you have to consider specific security advices according to the danger substance decree.

On the wrappings the informing stickers give notice about the respective dangers. The colours of this "C"-series contain lead.

While processing it is important to obey the hygienic precautions such as:

- Do not eat, drink or smoke while being at work.
- Do not inhale dust.
- Keep it away from food-stuff, beverage and fodder.
- In case of contact with skin: Wash off and rinse with water and soap.
- If having inhaled: Rinse mouth with cold water.

For more information please contact us or ask for a Material Safety Data Sheet. (MSDS).

### Storage

Colour powder grants the advantage of unlimited durability; if stored in dry condition.

The powders are hygroscopic. Before mixing with oil colours should be dried at a temperature of about 120°C, because even low contents of water leads to „cheesy“ pastes and cannot longer be perfectly printed.

Please take care to disperse the colour powder with the medium. Therefore use of a three roll mill or dissolver is recommended.

Even when stored in metal or glass containers, the colour pastes have a limited shelf-life of about 6 months. We advice you to store the pastes under cool conditions.

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