

<b>Technical Product Information</b>					
<b>ROTOVARIO Aqua Bronze Series</b>					
<b>Article-No.:</b>	<b>Product Name:</b>	<b>Article-No.:</b>	<b>Product Name:</b>	<b>Article-No.:</b>	<b>Product Name:</b>
025433..	4 409 Rich Gold	025432..	4 406 Rich Pale Gold	025430..	4 403 Pale Gold
025422..	6 409 Rich Gold	025435..	6 406 Rich Pale Gold	025434..	6 403 Pale Gold
025425..	8 409 Rich Gold	025424..	8 406 Rich Pale Gold	025423..	8 403 Pale Gold
025429..	<b>10 409 Rich Gold</b>	025428..	<b>10 406 Rich Pale Gold</b>	025427..	<b>10 403 Pale Gold</b>
<b>REVISION: 0</b>		<b>EDITION: FEBRUARY 2020</b>		<b>IDENT-NO.: 00515.E</b>	
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### Product description:

The ROTOVARIO aqua bronze series represents a portfolio of leafing bronze pigments in paste form.

- Pigment content of 70% allows highest flexibility in ink formulation.
- Four different particle sizes in three different colour shades available.
- Minimised VOC content enables an ecological balance.
- Especially suitable for acrylic or polyurethane binder systems without critical components (e. g. ammonia).

These products have not been especially developed for the formulation of inks for the production of packaging for food, beverages and tobacco. Due to our production processes for these products, we cannot guarantee necessary measures for FCM (Food Contact Materials), such as special raw material selection, control of raw materials and end products regarding composition and impurities or production according to GMP. A SoC is therefore not available for these products. When using these products in indirect food contact, the suitability for this application has to be tested before commercial use by the user through suitable analyses.

### Application:

ROTOVARIO aqua pigment pastes are suitable to formulate water-based gravure, flexo and screen printing inks.

As with all metallic inks the substrate has an influence on the final result. Very absorbent or uneven substrates often cause poor pigment orientation resulting in inferior brilliance. In some cases, the use of primers to improve the substrate surface is advantageous.

### Product properties:

All ROTOVARIO aqua products are stabilised for the use in usual acrylic and polyurethane binder systems.

In each respective case, special tests are necessary because of the multiple factors (binder systems, defoamers or other surface active substances) influencing the final result.

### Rub resistance and lamination properties:

The stabilizing additives are hydrophobic. Therefore the ROTOVARIO aqua products show a more or less leafing behaviour, independent from the base pigment.

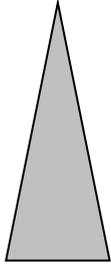
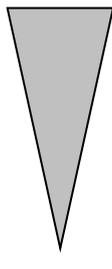
The rub resistance and the lamination properties are down to the final ink formulation.

### Additional product properties:

ROTOVARIO Aqua	4 409 RG 4 406 RPG 4 403 PG	6 409 RG 6 406 RPG 6 403 PG	8 409 RG 8 406 RPG 8 403 PG	10 409 RG 10 406 RPG 10 403 PG
<b>Pigment content (approx.)</b>	70 %	70 %	70 %	70 %
<b>Solid Content (approx.)</b>	73 %	73 %	73 %	73 %
<b>Pigment size D<sub>50</sub> (approx.)</b>	4,0 µm	6,0 µm	8,0 µm	10,0 µm
<b>VOC-content (approx.)</b>	1 %	1 %	1 %	1 %

For specifications of our products, please refer to the technical data sheet.

### Optical properties:

ROTOVARIO Aqua	Gloss	Coverage
4 409 RG 4 406 RPG 4 403 PG		
6 409 RG 6 406 RPG 6 403 PG		
8 409 RG 8 406 RPG 8 403 PG		
10 409 RG 10 406 RPG 10 403 PG		

### Handling:

The ROTOVARIO aqua pigment pastes are optimised for high metallic effects. The concentrates can be stirred directly into a water based binder system by using low shear stress aggregates.

Water based metallic inks are ideally dispersed under vacuum. This avoids air and foaming during production process.

Metallic inks tend to settle because of the high specific gravity of the pigment. This is normal and not due to a lack of quality. The inks can be easily stirred up and homogenised again. This should be done before viscosity is checked and adjusted. No pigment settling should be left on the bottom of the container.

Please refer to the Material Safety Data sheet of ROTOVARIO aqua series for further handling guidelines.

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**Guiding formulations:**

These suggested starting formulation are examples intended for general guidance only and do not represent the optimum result for any specific application.

Flexo printing ink

ROTOVARIO aqua	54,0 %
Zinpol 132 <sup>(1)</sup>	33,0 %
Water	13,0 %
Σ	100 %

Ideally disperse under vacuum: Homogenize ROTOVARIO aqua in binder system. Add other formula components and disperse. Adjust viscosity.  
Print viscosity for flexo: 25 – 35 s DIN 4 cup.

Gravure printing ink

ROTOVARIO aqua	52,0 %
ROTOSTAR Aqua 10-001 Medium	45,3 %
Byk 024 <sup>(2)</sup>	1,0 %
Aerosol OT 75 <sup>(3)</sup>	0,2 %
Aquacer 531 <sup>(2)</sup>	1,5 %
Σ	100 %

Ideally disperse under vacuum: Homogenize ROTOVARIO aqua in binder system. Add other formula components and disperse. Adjust viscosity.  
Print viscosity for gravure: 15 – 20 s DIN 4 cup.

Supplier:

- (1) Worlee/Noveon
- (2) BYK Additives & Instruments
- (3) Cytek Industries Ink

**Storage and transportation:**

All ROTOVARIO aqua types should be stored at temperatures below 25°C. High temperatures as well as very low temperatures should be avoided as these conditions could damage the product.

**Shelf life:** 6 months

Important: ECKART strongly recommends disposing of used ink after running on press, as the shelf life of this material can be greatly reduced due to various factors such as light, heat, contaminants etc.

ECKART cannot guarantee the shelf life of printing ink, which has been previously used or modified, nor for ink, which has been stored out with the conditions above.

For further information or samples, please contact:

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The data on this technical information sheet correspond with the current status of our knowledge and experience. The liability for the application and processing of our products lies with the buyer, and he is also responsible for observing any third party rights. We reserve the right to alter any product data as a result of technical progress or further developments in the manufacturing process.

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