


Technical Product Information			
STAPA® HYDROXAL V - Series			
Article-No.: 024045... 024044... 024106...	Product name: STAPA® Hydroxal V 2020 Silver STAPA® Hydroxal V 57137 Silver STAPA® Hydroxal V 70970 Silver	Article-No.: 024058...	Product name: STAPA® Hydroxal V Chromal VIII Silver
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Product description:

The STAPA® HYDROXAL V series represents a portfolio of non-leafing and leafing aluminium pigments in paste form.

- Pigment contents from 60% up to 70% allows highest flexibility in ink formulation.
- Four non-leafing grades offer good over printability and they are suitable for tinting (e.g. imitation gold).
 - Silver dollar:
The V 56137 and V 70970 types based on high brilliance silver dollar pigments. Due to the small pigment size of V 70970, this product shows high coverage.
 - Cornflake:
Hydroxal V 2020 is suitable for standard applications in gravure and flexo printing.
- Leafing grade: Hydroxal V Chromal VIII based on cornflake pigments for standard effects.
- The binder-free dispersions are compatible to the most water-binder systems.
- The dispersions are stabilized to minimised gassing. Due to the variety of available binders, a final stability test is necessary.

These products have not been especially developed for the formulation of inks for the production of packaging for food, beverages and tobacco. Therefore suitability for this application has to be tested before commercial use (e.g. via migration testing or risk analysis) and cannot be guaranteed by ECKART.

Application:

STAPA® HYDROXAL V 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:

Pigment concentrate based on non-leafing aluminum pigments, suitable for tinting, e.g. (imitation gold effects)

Pigment concentrate based on leafing aluminum pigments show brilliant effects.

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

Due to the hydrophobic nature of the stabilizing additives, all STAPA® HYDROXAL V types, independent from the nature of the base pigment, provide a more or less pronounced leafing effect in water borne systems.

Rub resistance and lamination properties:

The stabilizing additives are hydrophobic. Therefore, the STAPA® HYDROXAL V 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.

Leafing pigment pastes have tendencies to reduce rub resistance as well as to reduce lamination properties compared with corresponding non-leafing products. This tendency might be influenced further due to an inadequate binder system.

Non-leafing pigment pastes are suitable for the formulation of rub resistant inks. In each respective case, special tests are necessary because of the multiple factors influencing the final result.

Additional product properties:

STAPA® HYDROXAL V	70970	57137	2020	Chr. VIII
Pigment characteristic	Non-leafing			Leafing
Pigment type	Silver dollar		Cornflake	
Pigment content (approx.)	60%	70 %	70 %	65 %
Solid content (approx.)	68%	78 %	78 %	73 %
Pigment size D₅₀ (approx.)	10µm	15 µm	10 µm	15 µm
VOC content	< 0,1 %	< 0,1 %	< 0,1 %	< 0,1 %

For technical specifications please refer to the technical data sheet.

Optical properties:

Non-leafing products

STAPA® HYDROXAL V	Gloss	Hidding power
2020	*	***
70970	***	***
56137	**	**

Leafing products

STAPA® HYDROXAL V	Gloss	Hidding power
Chromal VIII	***	**

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Handling:

The STAPA® HYDROXAL V 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. No pigment settling should be left on the bottom of the container.

Please refer to the Safety Data sheet of STAPA® HYDROXAL V series for further handling guidelines.

Guiding formulations:

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

Rub resistant flexo printing ink

STAPA® HYDROXAL V 2020	25,0 %
ROTOSTAR Aqua ME 10-0001	64,3 %
No Foam ⁽¹⁾	0,2 %
Ceraflour 991 ⁽²⁾	0,5 %
Wasser	10,0 %
Σ	100,0 %

Ideally disperse under vacuum: Homogenize STAPA® HYDROXAL V 2020 in binder system. Add other formula components and disperse. Adjust viscosity. Print viscosity for flexo: 25 – 35 s DIN 4 cup.

Brilliant gravure printing ink

STAPA® HYDROXAL V Chromal VIII	20,0 %
Joncryl 2635 ⁽³⁾	64,6 %
No Foam ⁽¹⁾	0,2 %
Ceraflour 991 ⁽²⁾	0,2 %
Wasser	15,0 %
Σ	100,0 %

Ideally disperse under vacuum: Homogenize STAPA® HYDROXAL V Chromal VIII in binder system. Add other formula components and disperse. Adjust viscosity. Print viscosity for gravure: 15 – 20 s DIN 4 cup.

Bright Polychromatic Gold flexo printing ink

STAPA® HYDROXAL V 70970	25,0 %
Zinpol 132 ⁽⁴⁾	54,6 %
No Foam ⁽¹⁾	0,2 %
Ceraflour 991 ⁽²⁾	0,2 %
Sunsperser yellow YHD 6005 ⁽⁵⁾	7,0 %
Sunsperser orange OHD 7019 ⁽⁵⁾	3,0 %
Wasser	10,0 %
Σ	100,0 %

Ideally disperse under vacuum: Homogenize STAPA® HYDROXAL V 70970 in binder system. Add other formula components and disperse. Adjust viscosity. Print viscosity for flexo: 25 – 35 s DIN 4 cup.

Suppliers:
(1) Noveon
(2) Krahn Chemie
(3) BYK Additives & Instruments
(4) BASF
(5) Worlee/Noveon
(6) Sun Chemical

Storage and transportation:

All STAPA® HYDROXAL V 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:

12 months

For further information or samples, please contact:

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