



METALURE®

—silvershine®

HYDROSHINE®

STAPA® HYDROLAN S

Aluminum Pigments with Chrome-Like Effect
镀铬效果铝颜料

Ultra-Brilliant Aluminum Pigment Dispersions

超亮铝颜料分散体

METALURE® and SILVERSHINE P1000 are ultra-brilliant aluminum pigment dispersions creating the highest level of reflectance in solvent-based paints, inks and coatings. In a special physical vapor deposition (PVD) process, extremely thin aluminum pigments, which are free of lubricants, are manufactured. These platelets have a uniform, smooth surface exhibiting perfect non-leaving properties that result in a mirror-like effect. This effect cannot be achieved by conventional metallic effect pigments.

The METALURE® and SILVERSHINE P1000 dispersions are added to the finished paint or ink while stirring continuously. Compared to conventional aluminum pigments, METALURE® and SILVERSHINE P1000 show a significantly increased shear stability.

In the printing industry, the ability to simulate the reflectivity and flash of foil, hot stamping and vacuum metallizing makes METALURE® the optimum product to reduce costs by selectively printing in-line.

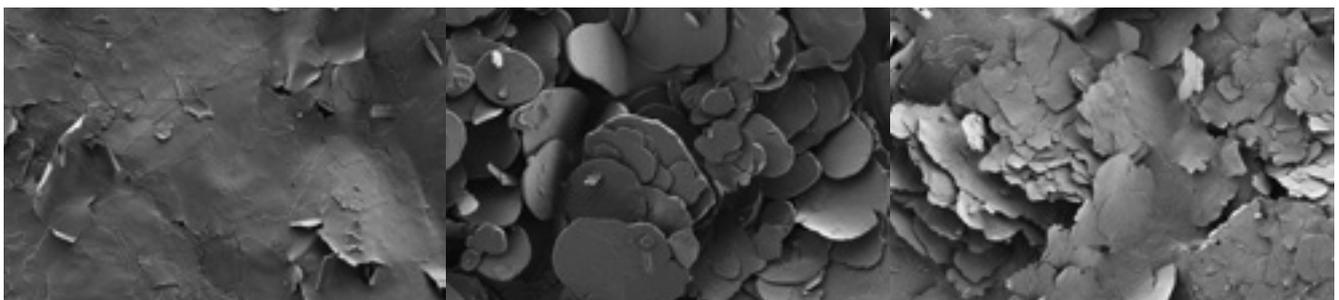
METALURE®和SILVERSHINE P1000 均为超亮铝颜料分散体，可以在溶剂型油漆、油墨和涂料中实现最高的反光效果。它们采用特殊的物理气相沉积工艺(PVD)生产，是不含润滑剂的超薄铝颜料。这些片状铝颜料拥有均匀光滑的表面，呈现完美的非浮特性，产生传统金属效果颜料所无法达到的镜面效果。

通过连续搅拌将 METALURE® 和 SILVERSHINE P1000 分散体加入至成品油漆或油墨中。相比于传统铝颜料，METALURE®和SILVERSHINE P1000 具有更高的耐剪切稳定性。

在印刷应用中，METALURE®具有媲美烫印和真空镀铝等工艺的视觉效果，选择性地使用连线印刷可以大幅降低实现高反光金属效果的制作成本。

SEM-Picture: Aluminum Pigment Types

不同铝颜料的显微镜图像



METALURE®

Silverdollar / 银元型

Cornflake / 玉米片形

Ultra-Brilliant Aluminum Pigment Dispersions

超亮铝颜料分散体

The striking features of METALURE® and SILVERSHINE P1000 are:

- Chrome-like finishes similar to metallization
- Very good rub resistance
- High reflective values
- Highly brilliant color effects in combination with organic color pigments
- Excellent color strength and hiding power
- Chrome-like effects due to low dry film thickness
- Overcoating with topcoats possible
- Product grades can be mixed to obtain further color shades

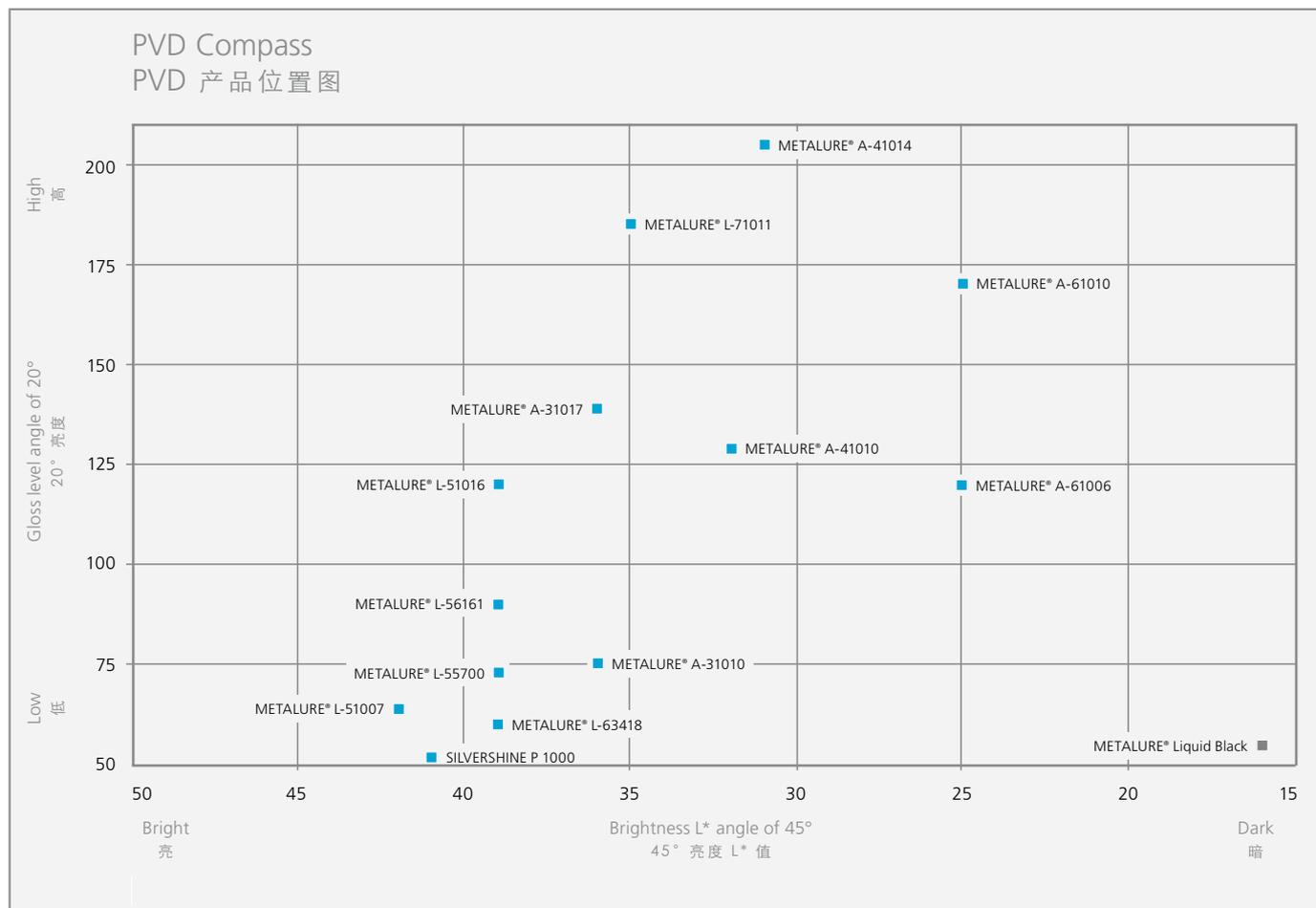
METALURE® L-types are not compatible with alcohol-rich formulations

METALURE® 和 SILVERSHINE P1000

的出色特性：

- 近似于电镀的镀铬效果
- 优秀的耐摩性
- 高反光度
- 与有机颜料组合实现高金属感彩色效果
- 极佳的色强度和遮盖力
- 因干膜厚度薄而具有镀铬效果
- 可上面漆
- 不同型号可混合使用，以获得更多色相效果

METALURE® L 型产品与富醇配方相容性不佳



Ultra-Brilliant Aluminum Pigment Dispersions

超亮铝颜料分散体

METALURE® & SILVERSHINE P	Grade 型号	Pigment Content 颜料含量	Particle Size Distribution 粒径分布	Solvent 溶剂	Coatings 涂料	Screen Printing 丝网印刷	Gravure Printing 凹版印刷	Flexo Printing 柔版印刷
Series/系列		%	D50 approx./约 [µm]					
Non leafing pigments / 非浮型颜料								
SILVERSHINE	P 1000	18	10	Methoxy propyl acetate/丙二醇甲醚醋酸酯	•	•		
METALURE® L-6	L-63418	10	10	Methoxy propyl acetate/丙二醇甲醚醋酸酯	•	•		
METALURE® L-5	L-54893	10	11	n-propyl acetate/醋酸正丙酯	•		•	
	L-54894	10	11	i-propyl acetate/醋酸异丙酯	•		•	
	L-55350	10	11	Ethyl acetate/乙酸乙酯	•		•	
	L-51007	10	7	Methoxy propyl acetate/丙二醇甲醚醋酸酯	•	•		
	L-55700	10	10	Methoxy propyl acetate/丙二醇甲醚醋酸酯	•	•		
	L-51016	10	16	Methoxy propyl acetate/丙二醇甲醚醋酸酯	•	•		
	L-56161	10	11	Methoxy propanol/丙二醇甲醚	•	•		
METALURE® L-7	L-71011 AE	10	11	Ethyl acetate/乙酸乙酯	•		•	
METALURE® A-3	A-31010 AE	10	10	Ethyl acetate/乙酸乙酯	•		•	
	A-31017 AE	10	17	Ethyl acetate/乙酸乙酯	•		•	
METALURE® A-4	A-41010 AE	10	10	Ethyl acetate/乙酸乙酯	•		•	
	A-41510 EN	15	10	Ethanol/乙醇			•	•
	A-41506 EN	15	6	Ethanol/乙醇			•	•
	A-41010 BG	10	10	Butyl glycol/乙二醇丁醚	•	•		
	A-41014 BG	10	14	Butyl glycol/乙二醇丁醚	•	•		
METALURE® A-6	A-61010 AE	10	10	Ethyl acetate/乙酸乙酯	•		•	
	A-61010 BG	10	10	Butyl glycol/乙二醇丁醚	•	•		
	A-61006 BG	10	6	Butyl glycol/乙二醇丁醚	•	•		

The MPA-isomer (2-Methoxy-propyl-acetate-1) has a mandatory identification from a maximum accepted concentration of 0.1% and will get a classification, toxic to reproduction (Cat 1 B). Eckart guarantee isomeric-free MPA (<0.1%) in all MPA containing products.

These products are: Metalure® L-55700, L-51007, L-51016, L-63418 and Silvershine P 1000.

MPA 异构体 (2-甲基丙醇乙酸酯) 的最大可接受浓度为 0.1%，超过则要被强制标识，归类为生殖毒性 (类别 1 B)。爱卡确保在所有含 MPA 的产品中无 MPA 异构体 (<0.1%)。

这类产品包括：Metalure® L-55700、L-51007、L-51016、L-63418 和 Silvershine P 1000。

METALURE®

—**silvershine®**

Bright
亮

METALURE® L-63418

METALURE® L-55700

METALURE® L-51016 MA

METALURE® A-41010 BG

METALURE® L-71011 AE

METALURE® A-61010 BG

Dark
暗

Specialities

特性

Black Chrome Metallic Effect with Extreme Resistance
具有极高耐性的暗调镀铬金属效果

METALURE[®] Liquid Black is based on chromium oxide; it is chemically inert and free of any chrome-VI compounds. Thus, it is toxicologically safe. It is manufactured during a very elaborate metallization process which guarantees the black, mirror-like appearance.

METALURE[®] Liquid Black is perfectly suited for all common coatings systems: waterbased, solvent and UV curing. There is a great variety of application fields, ranging from exterior applications, automotive and accessories coatings to interior as well as decorative purposes.

The following images highlight the outstanding chemical resistance of METALURE[®] Liquid Black:

METALURE[®] Liquid Black 以氧化铬为基材，呈化学惰性且不含任何六价铬化合物，毒理学上安全。该产品采用非常精细的工艺制成，以确保获得黑色镜面效果。

METALURE[®] Liquid Black 完美适用于水性、溶剂型和紫外固化涂料体系。产品应用范围广泛，涵盖户外涂料、汽车及其附件涂料、户内涂料和装饰涂料等。

下图说明了 METALURE[®] Liquid Black 出色的耐化学性：

Chemical Resistance Test for Plastic Coatings of Automotive Interiors

汽车内饰塑胶涂料的耐化学性测试

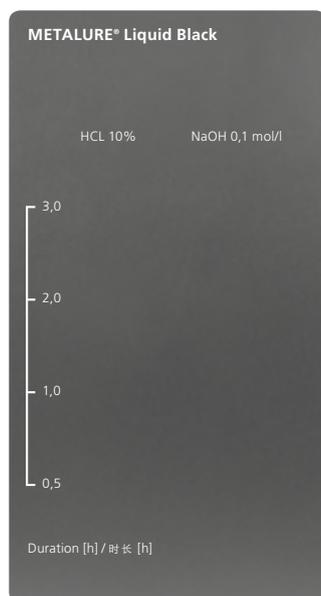
The pigment is not attacked by the sodium hydroxide; its colour stays the same.
颜料未受氢氧化钠的腐蚀；其颜色保持不变。



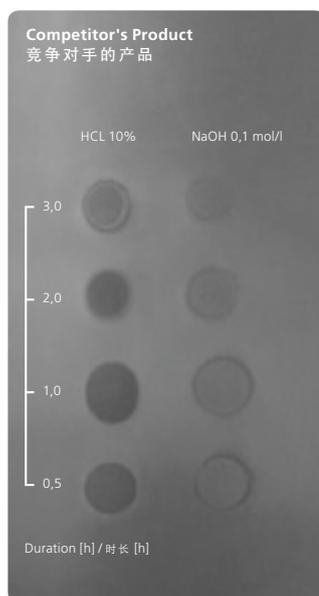
4 h / 55°C
NaOH 0,1 mol/l

4小时 / 55°C
NaOH 0,1 mol/l

Chemical Resistance Test / 耐化学性测试



METALURE[®] Liquid Black



Competitor's product (darkest PVD product based on aluminium)
竞品（最暗的 PVD 铝颜料）

Specialities

特性

Technical Data / 技术数据

	Solid content 固含量	Particle size distribution 粒径分布	Solvent 溶剂	Coatings 涂料	Screen Printing 丝网印刷	Gravure Printing 凹版印刷	Flexo Printing 柔版印刷
	%	D50 approx./ 约 [μm]					
METALURE [®] Liquid Black	10	14	Methoxy propanol 丙二醇甲醚	•			



In order to access our METALURE[®] Liquid Black movie, please scan this QR-code.
请扫描此二维码观看 METALURE[®] Liquid Black 视频短片。



Specialities

特性

Mirror Effect for Highest Reflection

具最高反射性能的镜面效果

METALURE[®] Mirrorshine 1006 is an extremely thin leafing aluminium pigment. With its pronounced mirror-like effect, it is ideally suited for applications that require highest reflection properties, such as the coating of reflectors or for brilliant printing applications. It can be used for water-based and conventional systems.

METALURE[®] Mirrorshine 1006 是一种超薄浮型铝颜料。所产生的镜面效果，令其成为提出最高反射特性要求时的理想选择，例如车灯反光罩涂料或高金属光亮感印刷油墨。该产品同时适用于水性和传统配方。

Technical Data / 技术参数

	Solid content 固含量 %	Particle size distribution 粒径分布 D50 approx./ 约 [µm]	Solvent 溶剂	Coatings 涂料	Screen Printing 丝网印刷	Gravure Printing 凹版印刷	Flexo Printing 柔版印刷	Offset Printing 胶版印刷
METALURE [®] Mirrorshine 1006	10	6	Ethanol, Methoxy propanol 乙醇、丙二醇甲醚	•	•	•	•	•





Specialities

特性

Stabilized METALURE® Dispersions
经稳定化处理的 METALURE® 分散体

Product characteristics:

The following METALURE® UV dispersions are recommended for UV-curing ink formulations and therefore are pasted in suitable solvents.

产品特点：

下列 METALURE® UV 分散体被推荐用于紫外固化油墨，因此与特定溶剂混合配制。

METALURE® UV Grade / 型号	Applications 应用				Average Particle Size 平均粒径	Pigment Content 颜料含量	Media 光引发剂	Basic METALURE® Type 基本 METALURE® 类型	
	Gravure Printing 凹版印刷	Flexo Printing 柔版印刷	Screen Printing 丝网印刷	Coatings 涂料	µm	%			
DA-45001		•	•	•	10	50	Darocure 1173		A
DA-53001		•	•	•	12	30	Darocure 1173	L	



SILVERSHINE S Series for Solvent-Based Coatings

适用于溶剂型涂料的 SILVERSHINE S 系列

The SILVERSHINE S series consists of extremely thin silver dollar pigments. Their unique morphology and narrow particle size distribution result in a very bright and metallic optical effect.

Various decorative applications are possible – from glossy metallic to matt chrome – due to its excellent flop, extremely high brilliance and light reflection.

The smooth and elegant look is supplemented by optimal opacity. In comparison with corresponding silver dollar pigments, the opacity is 2.5 times higher.

The SILVERSHINE S-series is suitable for solvent-based and as HYDROLAN S series for water-based coatings.

SILVERSHINE S 系列为极薄银元型颜料。它们独特的形态和狭窄的粒径分布产生了非常明亮的金属光泽效果。

由于具有卓越的随角异色性以及极高的金属感和反光性能，该产品适用于各类装饰应用 – 从光亮金属感到哑光镀铬效果。

极佳的遮盖力使外观光滑雅致。与相应的银元颜料相比，不透明性要高出 2.5 倍。

SILVERSHINE S 系列适用于溶剂型涂料，而 HYDROLAN S 系列则专为水性涂料开发。

SILVERSHINE S Grade/型号	Non-Volatile Content 不挥发物含量 %	Particle Size Distribution/粒径分布 determined by /检测仪器 CILAS 1064 approx./约 [μm]			Solvent 溶剂
		D10	D50	D90	
S 1100	30	6	11	16	Mineral spirit/Solvent naphtha 200# 溶剂汽油 / 石脑油溶剂
S 1500	25	9	15	26	Methoxy propanol/丙二醇甲醚
S 2100	50	11	20	32	Mineral spirit/Solvent naphtha 200# 溶剂汽油 / 石脑油溶剂



SILVERSHINE S 1100

SILVERSHINE S 1500

SILVERSHINE S 2100





Ultra-Brilliant Effect Pigment Dispersions for Water-Based Inks and Coatings

适用于水性油墨和水性涂料的超亮金属效果颜料分散体

HYDROSHINE is a highly brilliant effect pigment dispersion for water-based coatings based on the most advanced PVD aluminum pigments. ECKART offers a choice of different technologies to meet customers' specific demands for gassing stability, humidity resistance and optical performance.

HYDROSHINE 是一种适用于水性涂料的高亮效果颜料分散体，基于最先进 PVD 铝颜料制成。爱卡提供多种不同技术来满足客户在发气稳定性、耐湿性和光学特性等方面的特殊要求。

The following HYDROSHINE series are available:

下列 HYDROSHINE 产品可供选择：

HYDROSHINE WS-1000

High performance pigments (additive-stabilized), in different solvents.

HYDROSHINE WS-1000

可以不同溶剂供应的高性能颜料（添加剂稳定型）。

HYDROSHINE WS-3000

Heavy-metal free encapsulated pigment for high chemical and hydrolysis resistance. Highly brilliant chrome-like effects.

HYDROSHINE WS-3000

不含重金属的包覆型颜料，具有极高的耐化学性和抗水解性。高亮镀铬效果。

HYDROSHINE WS-4000

Passivated PVD pigments for dark chrome-like effects.

HYDROSHINE WS-4000

钝化 PVD 颜料，可产生暗调镀铬效果。

HYDROSHINE WS-6000

Passivated PVD pigments for ultra dark chrome-like effects.

HYDROSHINE WS-6000

钝化 PVD 颜料，可产生超暗调镀铬效果。

HYDROSHINE Grade/型号	Pigment Content 颜料含量 %	Particle Size Distribution 粒径分布 D50 approx./约 [µm]	Solvent 溶剂	Properties 特性
SiO₂-stabilized/ 二氧化硅稳定型				
HYDROSHINE WS-3001	10	11	Iso propanol/ 异丙醇	Very high chemical resistance and gassing stability 非常高的耐化学性和发气稳定性
HYDROSHINE WS-3003	10	11	Iso propanol/ 异丙醇	Excellent optical effects, excellent intercoat adhesion 出色的光学效果和层间附着力
HYDROSHINE WS-3004	10	11	Iso propanol/ 异丙醇	Very high chemical resistance and gassing stability 非常高的耐化学性和发气稳定性
HYDROSHINE WS-4001	10	10	Iso propanol, Butyl glycol 异丙醇、乙二醇丁醚	Dark grade on SiO ₂ -basis, very high chemical resistance 二氧化硅稳定型的暗调型号，具有非常高的耐化学性
HYDROSHINE WS-4140	10	14	Iso propanol, Butyl glycol 异丙醇、乙二醇丁醚	Dark, highly brilliant grade on SiO ₂ -basis, very high chemical resistance 二氧化硅稳定型高金属感暗调型号，具有很高的耐化学性
HYDROSHINE WS-6001	10	10	Iso propanol, Butyl glycol 异丙醇、乙二醇丁醚	Darkest grade on SiO ₂ -basis, very high chemical resistance 二氧化硅稳定型的最暗调型号，具有非常高的耐化学性
Additive-stabilized*/ 添加剂稳定型*				
HYDROSHINE WS-1011	23	11	Iso propanol/ 异丙醇	Highly brilliant 高亮金属感
HYDROSHINE WS-4021	10	11	Butyl glycol/ 乙二醇丁醚	Dark chrome-like effect 黑亮效果
Leafing Grade/ 浮型				
METALURE® MIRRORSHINE 1006	10	6	Ethanol, Methoxy propanol 乙醇、丙二醇甲醚	Leafing grade with superior mirror effect 具有出色镜面效果的浮型型号

* (Available upon request/ 可按需供应)

Guiding Formulation

指引配方

Chrome-Like Effect Paint (for Water-Based Systems) with HYDROSHINE WS Grades

使用 HYDROSHINE WS 配制的镀铬效果水性漆

Raw materials	
a) Setaqua 6801 ⁽¹⁾	28,45
Dist. water	7,60
mix	
b) Butyl glycol	1,85
Dist. water	9,30
DMEA, 5% in dist. water	0,85
mischen	
c) HYDROSHINE WS Typ ⁽²⁾ (10% solid content)	8,00
Butyl glycol	5,00
Setal 6306 SS-60 ⁽¹⁾	4,70
Maprenal MF 900 w ⁽³⁾	1,10
stir 5 min.	
d) DMEA, 5% in dist. water	3,00
Dist. water	30,15
	100,00

原料	
a) Setaqua 6801 ⁽¹⁾	28.45
去离子水	7.60
混合	
b) 乙二醇丁醚	1.85
去离子水	9.30
DMEA, 5% 去离子水溶液	0.85
混合	
c) HYDROSHINE WS 铝浆 ⁽²⁾ (10%固含量)	8.00
乙二醇丁醚	5.00
Setal 6306 SS-60 ⁽¹⁾	4.70
Maprenal MF 900 w ⁽³⁾	1.10
搅拌5分钟	
d) DMEA, 5% 去离子水溶液	3.00
去离子水	30.15
	100.00

Processing

Add components b), c) and at last d) to a).

pH value: 7.5-8.0 (DMEA 5% in dist. water)
Solid content: 16.8%

Spraying viscosity: 15-20 sec. DIN cup 4mm / 20 °C
Diluent: Dist. water

Stoving conditions: 30 min. 140 °C

配制

把 b)、c) 和 d) 依次添加进 a)。

pH 值: 7.5-8.0 (5% DMEA去离子水溶液)
固含量: 16.8%

喷涂黏度: DIN 4mm 杯 15-20 秒 / 20 °C
稀释剂: 去离子水

烘烤条件: 140 °C 30分钟

Suppliers / 原料供应商:

(1) www.nuplexresins.com

(2) www.eckart.net

(3) www.ineosmelamines.com

STAPA® HYDROLAN S-Series / STAPA® HYDROLAN S 系列

Silica Encapsulated Aluminum Pigments for Water-Based Coatings 适用于水性涂料的二氧化硅包覆铝颜料

The STAPA® HYDROLAN S series are stabilized aluminum pigments which have been designed for water-based coatings. Utilizing a proprietary stabilization process our conventional aluminum pigments are encapsulated with a transparent and homogeneous silica layer. STAPA® HYDROLAN S pigments exhibit excellent gassing stability and a high shear resistance. The narrow particle size distribution results in a high metallic gloss.

STAPA® HYDROLAN S 系列是专为水性涂料设计的稳定型铝颜料。利用专有的稳定工艺为传统铝颜料包覆上一道均匀透明的二氧化硅层。STAPA® HYDROLAN S 颜料具有极佳的发气稳定性和耐剪切性能。狭窄的粒径分布使其具有高金属光泽。

STAPA® HYDROLAN S Grade/型号	Non-Volatile Content 不挥发物含量 %	Particle Size Distribution/粒径分布 determined by / 检测仪器 CILAS 1064 approx./约 [µm]			Solvent 溶剂
		D10	D50	D90	
S 1100	50	6	11	16	Iso propanol/异丙醇
S 1500	25	9	15	26	Iso propanol/异丙醇
S 2100	60	11	20	32	Iso propanol/异丙醇

ECKART GmbH
Guentersthal 4
91235 Hartenstein, Germany
Tel +49 9152 77-0
Fax +49 9152 77-7008
info.eckart@altana.com
www.eckart.net

ECKART America Corporation
4101 Camp Ground Road
Louisville, Kentucky 40211, USA
Tel +1 502 775-4241
Fax +1 502 775-4249
Toll-free: 877 754 0001
info.eckart.america.ky@altana.com
www.eckart.net

ECKART America Corporation
830 East Erie Street
Painesville, Ohio 44077, USA
Tel +1 440 954-7600
Fax +1 440 354-6224
Toll-free: 800 556 1111
info.eckart.america.oh@altana.com
www.eckart.net

0.5/February2017.1 CO/GA
099147XX001

ECKART Asia Ltd.
Unit 3706-08, 37/F, Sunlight Tower
248 Queen's Road East, Wan Chai
Hong Kong
Tel +852 3102 7200
Fax +852 2882 5366
info.eckart.asia@altana.com
www.eckart.net

With compliments
谨致友好问候

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided – especially that contained in our safety data and technical information sheets – and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility.

本手册所提供的数据、本公司在应用技术方面的建议以及所涉及的第三方权益，无论是口述、书面或通过试验的，均真实无伪，但并不包含我们的任何保证或担保。我们的建议，并不能免除用户在使用和处理我们的产品时，对其适用性，以及对提供的数据特别是安全数据和技术信息，进行验证的义务。任何对我们产品的施工应用、使用和处理，以及用户任何依据我们的技术建议所生产的产品，由于不受我们控制，因此均为用户责任。