



**STAY/STEEL**

Stainless Steel Flake Pigments

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## Stainless Steel Flake Pigments

Since the early 50's stainless steel flake pigments have been used commercially in protective coating formulations for metal substrates. Their use is well established in industrial maintenance and specialty coatings and is continually increasing. Stainless steel flake pigments incorporated in a variety of high solids solvent based and water based systems improve the performance of conventional protective coatings.

STAY/STEEL® stainless steel flake pigments are delivered as powder. The products are consisting of AISI 316L alloy milled to a uniform particle size. STAY/STEEL® pigments act two ways: chemically and mechanically.

Chemically, STAY/STEEL® stainless steel flake pigments resist corrosion and ultraviolet attack. Mechanically, they are strong, hard and highly abrasion resistant. STAY/STEEL®, being non-leafing, permits the flakes to build up a multi-layer structure tightly bonded to the substrate. As erosion of the coating binder progresses in service, the stainless steel particles become more and more exposed, providing continued protection for the remainder of the coating and substrate beneath. The result is a coating with very long service life and outstanding appearance.

More recently, newly developed low nickel STAY/STEEL® LN stainless steel flake pigments have been introduced to the market due to demands from a regulatory standpoint, with the nickel content being less than 0.1 %. These low nickel pigments complete the STAY/STEEL® product portfolio and offer similar functional properties to the standard STAY/STEEL® pigments but have slightly different optical effect, having a bluer shade (less yellow).

## Features

### Corrosion Resistance

- STAY/STEEL® flake pigments are resistant to corrosive conditions
- STAY/STEEL® pigments resist deterioration from staining, tarnishing, oxidation and chemical attack

### Resistance to UV Degradation

- Excellent outdoor stability
- High specific gravity (7.55), forming a multi-layer structure throughout the film preventing UV rays to penetrate

### Moisture Resistance

- Cost effective solution to make metallic powder coatings which offers good moisture resistance

### Abrasion Resistance:

- STAY/STEEL® pigments are hard, durable and abrasive resistant
- This advantage allows it to be used in industrial flooring applications where mechanical abrasion is a problem

### High Temperature Resistance

- STAY/STEEL® pigments have high thermal conductivity and can dissipate heat effectively
- This helps to prevent temperature build up in the coating layer

### Chemical Resistance

- Inert to chemical attack
- Are Resistant to acids, alkalis and chemicals and are superior to other commonly used primer pigments
- No chemical encapsulation needed due to inherent stability, which offers an advantage over aluminum pigments

## Portfolio and Applications

STAY/STEEL	Article number	Particle size D50 [µm]	Comment	Particle Shape
316L K Grade	022230	35	Standard AISI 316L alloy	Irregular
316L Grade*	046692	35	Standard AISI 316L alloy	
LN 75	023324	75	High sparkle low nickel grade	
LN 35	018008	35	Standard particle size low nickel grade	
LN 25	022172	25	Fine particle size low nickel grade	

\* Only available for the US market

STAY/STEEL® stainless steel pigments offer resistance properties in many applications, i.e. bridges, electrical transmission towers, chemical processing equipment with its main area being corrosion protection.

Standard packaging size: 25 kg (EU)/55 lbs (US)  
 Standard sample size: 100 gr  
 Total shelf life of STAY/STEEL products: 24 months

- In powder coatings, a further advantage is the ease in formulating with the STAY/STEEL® pigment as an alternative to double encapsulated aluminum pigments – the STAY/STEEL® pigment is very stable and therefore, does not require encapsulating which also offers a cost-effective alternative to the treated aluminum
- STAY/STEEL® stainless steel pigments offer a very unique color space and with the introduction of the LN75, the effect gamut has been increased. STAY/STEEL® LN75 offers a “sparkle” effect that gives a closer match to the aluminum-type pigment
- For more information, please contact your local ECKART technical/sales representative



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

With compliments

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 11 11  
info.eckart.america.oh@altana.com  
www.eckart.net

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

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