

Alesta® ZeroZinc

Anticorrosive Primer ZF ZeroZinc

ZF00017121720 EDGE PRIME ± RAL 7032

Alesta® ZeroZinc Edge Prime is a Zinc-free anticorrosion powder primer and uses High Density Crosslinking Technology to improve the barrier effect. The product is based on very high performance epoxy resin and has excellent resistance to chemicals and humidity. The special viscosity characteristics of Alesta® ZeroZinc Edge Prime allow improved edge coverage, isolating the metal from its environment and providing excellent corrosion protection even under the most severe conditions (C5-I & C5-M) according to the ISO 12944 standard.



Characteristics

- Extra Matt Smooth
- Solid
- Tribo/Corona

Usage Area

- Protection and decoration of interior parts
- Gas or liquid tanks, pipelines, structural steelwork, trucks, trailers & car parts



Approvals

Qualisteelcoat: Approved



- This powder coating complies with the European Directives "Restriction of the use of certain hazardous substances" 2011/65/EU and 2015/863/EU (RoHS)

The following data has been obtained under laboratory conditions as described below. Actual product properties such as gloss, colour and finish may vary depending on application conditions.



Test Conditions

- Curing Conditions (object temperature) 12 min @ 180°C
- Substrate 0,8 mm Iron phosphated & passivated steel panels
- Film thickness 70 ± 10 µm
EN ISO 2360

Physical Data

- Density 1,57 g/cm³
calculated



Product Performance / Film Properties

Gloss @ 60° EN ISO 2813	3,5 ± 1,5
Adhesion EN ISO 2409	GTO
Impact Resistance EN ISO 6272	1 kg / 30 cm
Impact Resistance EN ISO 6272	1 kg / 50 cm For a 2-layer system: Primer 60 µm + Alesta® AP Gloss 70 µm

Anticorrosion performance (Tables given as an indication – please refer to the PIB document)

Substrate: Cold rolled steel 20/10

- Film thickness Alesta® ZeroZinc Edge Prime: 60-80 µm & Alesta® AP RAL 9010: 60-80 µm
- Estimated durability according to the corrosive categories of the ISO 12944 standard:

	C2	C3	C4	C5-I	C5-M
Iron phosphating + passivation	High durability	High durability	Low durability		
Zinc phosphating + passivation	High durability	High durability	High durability	Low durability *	Low durability *
Grit blasting or sand blasting Sa 2 ^{1/2} minimum / Rz=50/80 µm – Ra=7/12	High durability	High durability	High durability	Low durability *	Low durability *

* please contact us

High durability
 Low durability

Substrate: Aluminium

- Film thickness Alesta® ZeroZinc Edge Prime: 60-80 µm & Alesta® AP RAL 9010: 60-80 µm
- Surface pretreatment: Yellow chromating
- Laboratory test results:

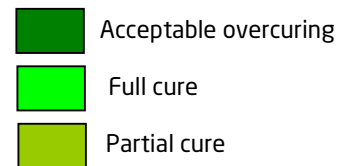
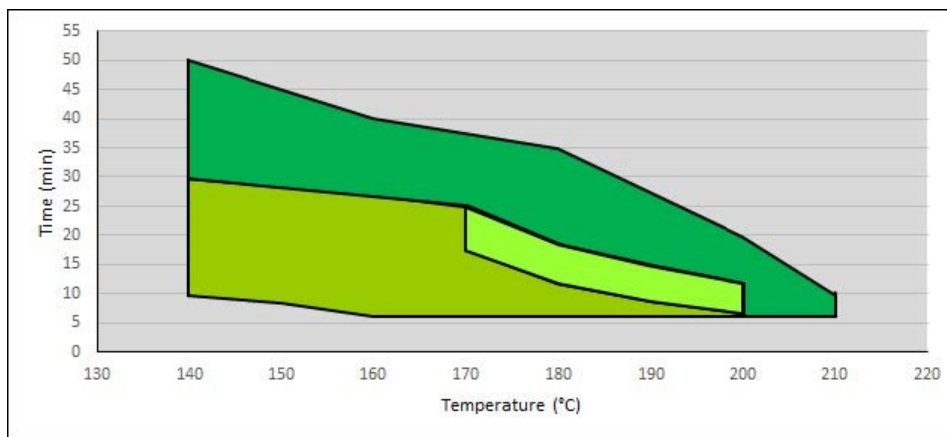
	Acetic Salt Spray Test 1000 hours	Humidity Chamber 1000 hours
Corrosion	0	0
Blistering	0	0
Adhesion (ISO 2409)	GTO	GTO
Scribe	No corrosion Maximum disbondment = 0,5 mm	No corrosion No disbondment

Protection and expected performance will vary according to the design of the part to be painted, the quality of the surface pretreatment, the implementation and thickness of the coating system, as well as the maintenance program of the coated surfaces.



Curing Conditions (object temperature)

- Can be cured using a variety of methods, e.g. IR, convection, combi ovens. In direct gas ovens, combustion by-products may cause significant colour changes (for specific advice, please contact us).
- For optimum intercoat adhesion, partial cure of the primer is recommended prior to application of the topcoat. This should be followed by full cure of the combined coating system. Alternatively, the primer can be fully cured prior to the application of the topcoat. This method is preferred if applying a liquid topcoat afterwards.
- Product is formulated for optimum intercoat adhesion under industrial curing conditions, particularly within the specified boundaries* as defined in the curing schedule:



Object temperature

Partial cure:
10-30 min @ 140°C
6-27 min @ 160°C

Full cure:
18-25 min @ 170°C
12-19 min @ 180°C
7-12 min @ 200°C

*** In all other conditions (especially with a direct fired gas oven) it is advisable to test to confirm suitability**

N.B.: When melted (but not cured) the coating appearance is glossy

This is an object temperature curing window and sufficient time for heat-up must be added. This time will depend on metal thickness as well as the temperature setting and airflow in the oven.



Storage Stability

12 months/35°C
Shelf life applies to materials stored in sealed plastic bags under dry and cool conditions.



Substrate Preparation

- Both chemical and mechanical surface pretreatments are compatible with Alesta® ZeroZinc Edge Prime.
- Surface pretreatment has to be defined depending on type of substrate and required performance.
- Substrate must be correctly prepared and dried before using Alesta® ZeroZinc Edge Prime and surface should be free of all contamination such as rust, oxide scale, oil and grease, old paints etc.



Application

- Do not mix this product with other powder coatings.
- Can be applied with manual or automatic guns.
- Alesta® ZeroZinc Edge Prime is easily applicable, with high transfer efficiency.
- Spraying settings will depend upon the geometry of the object being coated as well as the required film thickness. It is the responsibility of the applicator to make the appropriate adjustments*. Optimum coating performance will be obtained with a thickness of 60-100 µm.
*Please refer to the document "Best Practice for use of ZEROZINC 2-layer systems"
- Alesta® ZeroZinc Edge Prime easily overcoatable with specified Alesta® topcoats or liquid paints without sanding or any other preparation* (within 12 hours).
*Cleaning is necessary if primer surface becomes contaminated (dust, oil etc.)
- All other conditions must be checked before use with an adhesion test.
- Recycling of the powder: possible up to 30 %.



Comments

- Certain chemicals or domestic cleaning products can cause damage to the appearance of the coating. Please test a small inconspicuous area first to confirm suitability.
- In instances where the coating will be subjected to additional processes (such as printing, labelling, overcoating, postforming, gluing, application of sealant or any other post-treatment), adequate testing should be performed to confirm suitability. Prototypes should be prepared under conditions that are representative of the final production process.
- Please contact us for specific questions.
- Coated parts should be packed after they are fully cooled using suitable materials that are free of plasticizers. Packaged parts should be stored under cover to avoid the formation of condensation (for example under plastic wrapping film) which could result in permanent marks on the surface of the coating.



Safety

Consult the Safety Data Sheet prior to use

The information provided herein corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since Axalta cannot anticipate all variations in actual end-use conditions Axalta makes no warranties and assumes no liability in connection with any of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights.

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