



NEOKEM SA
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Technical Data Sheet

PP 652/Cosmos

Architectural Super Durable
 Mat Smooth
 Bonded Powder Coatings

product description

PP 652/Cosmos is a new generation of Super Durable smooth mat powder coatings. Due to its superior weathering resistance, 3 years Florida, it is recommended for architectural and other demanding applications where gloss, color retention and long-term aesthetics are important. It is bonded using Neobond proprietary method, thus ensuring homogeneous metallic effect and stability during recycling. PP 652 is designed for architectural use, on aluminum and galvanized steel. It is recommended for architectural aluminum profiles, panels, railings, outdoor machinery and equipment, automotive parts etc.

certifications and approvals

PP 652 is certified with the international quality label Qualicoat (Class 2 - Category 1, Approval number: P-1653).

PP 652 meets the requirements of EN 12206-1:2021, class b.

In terms of reaction to fire, and in accordance with EN 13501-1, Neotec architectural polyester powder coatings are classified as: A2- s1, d0.

All **PP652** products are heavy metal and TGIC free, they comply with the European directives 2011/65/EU and 2015/863/EU (RoHS).

powder properties

• Colour	Cosmos Collection
• Gloss (ISO 2813/60°) *	30 ± 5 GU**
• Density (ISO 8130-3)	1.38 ± 0.20 gr/cm ³ (Depending on colour)
• Curing Conditions	15 minutes at 190 °C (Object temperature)

* The method is not suitable for metallic coatings. **Gloss may vary according to curing conditions.

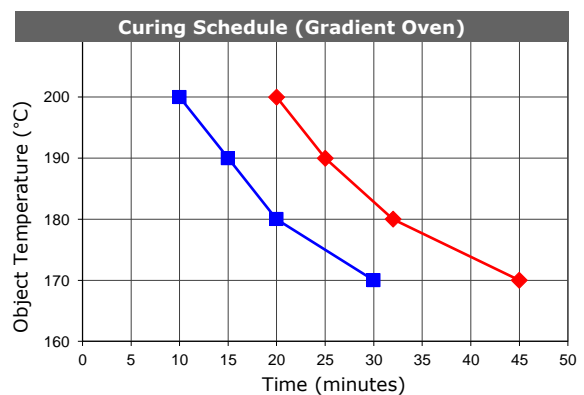
application

PP 652 Cosmos is applied at a thickness of 60-100 microns by electrostatic spray or tribo-charging equipment. For specific recommendations please consult the "Neokem Architectural series: Application Guidelines for Metallic Effect Powder Coatings" available from Neokem. The curing of the powder occurs in a suitable convection oven. Recommended Curing Index, at a minimum 100.

pretreatment

For aluminum components a full multistage chromate pretreatment, suitable chrome-free pretreatment or suitable pre-anodizing is required to obtain optimal anticorrosion protection. After anodic pretreatment, the aluminum shall be rinsed for such time and at such a temperature as is required to remove the acid from the pores and to fulfil the requirements of the wet adhesion test. Enhancing rinsing with a hot sealing step or a passivation alternative system step is permitted. When working with class 2 powder coatings, for better results, optimization of the pretreatment procedure may be necessary, advice should be sought from the pretreatment supplier.

For galvanized steel a multistage Chromate or Zinc Phosphate pretreatment or controlled sweep blasting is necessary. Attention should be paid at the degassing properties of galvanized steel. **For steel** substrates Iron Phosphate or Zinc Phosphate pretreatment is essential. For improved corrosion protection on steel and galvanized steel, Neotec E20/PR anticorrosive primer over a correctly prepared substrate is recommended.



Comments: Gradient oven results may differ from industrial application and are given for guidance only. Gloss and colour difference depends a lot on oven type. For direct flame gas ovens please contact us. Avoid rapid temperature rises.

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► physicochemical performance of the coating

Test Conditions

The general properties of the coating are determined on degreased and chromated Aluminum (DIN 50939). The results are based on mechanical and chemical tests that have been carried out under laboratory conditions as described in Qualicoat specifications. Actual product performance will depend upon the conditions under which the product is used.

- Curing Conditions: 15 minutes at 190 °C
- Thickness (EN ISO 2360): 60 - 70 microns

Mechanical Properties

- Adhesion (EN ISO 2409, 2mm): Pass, 0
- Bend Test (EN ISO 1519): Pass 5mm, no detachment
- Erichsen Cupping (EN ISO 1520) >5mm, no detachment
- Reverse Impact (EN ISO 6272-1, EN ISO 6272-2, ASTM D2794): >2.5 Nm, no detachment
- Indentation Buchholz (EN ISO 2815): >80

Corrosion Tests – Chemical Properties

- Sulfur dioxide test in a humid atmosphere (ISO 22479): Pass 24 cycles
- Acetic acid salt spray (EN ISO 9227): Pass 1000 hours
- Resistance to mortar (ASTM D3260, EN12206-1, par.5.9): Pass 24 hours
- Resistance to boiling water (Qualicoat method 1): Pass 2 hours
- Condensation water test (EN ISO 6270-2): 1000 hours, no blistering

Weathering Tests

- Natural weathering 36 months Florida 5° South (ISO 2810): > 50% gloss retention.
- Accelerated Weathering test EN ISO 16474-2 (Qualicoat cycle): > 90% gloss retention after 1000 hours.

► post application

For the suitability of post coating processes such as post forming, or the use of sealants, adhesives etc., please consult NEOKEM. Generally, Class 2 powder coatings as PP652 have limited post forming properties. Lower film thickness, higher environment or item temperature, processing of the items as soon as possible after curing, help to achieve better results. In any case preliminary tests and optimization of the procedure is recommended, before any full-scale production

► maintenance

Generally, the coated parts must be cleaned in accordance with the regulations: Cleaning and Protection, Facade and Monument RAL-GZ 632. For specific recommendations on cleaning and maintenance, please consult the “Neotec Architectural series: Cleaning and Maintenance Guidelines” available from NEOKEM.

► storage-shelf life

Storage conditions: Keep dry, under 25 °C, in closed boxes. The maximum temperature should not exceed 35 °C.
Shelf life-Recommended Retest Period (RRP): 36 months from the day of manufacture if the above storage conditions are met. After this period, the product can be used, provided that the free flow of the powder, the mechanical properties and the appearance of the film have been positively tested. This extension lasts for a maximum of 6 months after the tests. Higher storage temperatures could lead to shorter RRP.



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➤ safety precautions

Neotec PP 652 is intended for use only by professional applicators in industrial environments. Before using the product, always read the relevant material data sheet (SDS) that has been provided. If for any reason the SDS is not available, please contact NEOKEM to obtain a copy.

Disclaimer: *This technical data sheet is aimed to advise you. This technical information comes from our experience, as well as that of specialized laboratories. Whilst we endeavour to ensure that all advice we give about the product is correct, we have no control over either the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage arising out of the use of the product. The application and the use of our products are placed under your responsibility. This does not constitute a formal or implied guarantee. The user, according to his requirements undertakes full responsibility of application and testing of the products to determine the suitability for a particular purpose. The information contained in this sheet is liable to modification in the light of experience and our policy of continuous product development. Prevailing Language: in the event of any discrepancy between the English original version of this document and any translation in other language, the English version prevails.*