

POLITHERM 22 R SM GRAY UL W N6,5 MA

Code: 18655158

PRODUCT DESCRIPTION

Hybrid powder coating with good adhesion and flexibility, high physical resistance and good chemical resistance.

RECOMMENDED USE

Coating of metal parts for general use. This product can be used as a primer or as a finishing layer.

PROPERTIES

Enhanced with additives to reduce baking time and/or temperature.

CERTIFICATIONS AND APPROVALS

Free from heavy metals and other substances provided for in RoHs Directive 2015/863 EU of 31/03/2015.

Powder coating certified according to UL license MH63984.

PACKAGING

Cardboard box with 25 kg in high-density polyethylene bag.

CHARACTERISTICS OF MANUFACTURED PRODUCT

Resin	Epoxy/Polyester
Gloss	Matte
Finish	Smooth
Specific gravity (± 0,10)	1,65 g/cm³
Theoretical Coverage	8,66 m²/kg in medium thickness 70 µm
Mass loss during cure	Maximum 2%
Moisture content	Maximum 0,6%
Shelf life	12 months
Storage condition	It must be stored in closed containers, in cool, dry and covered places, at an ambient temperature not exceeding 30°C.

APPLICATION CHARACTERISTICS

Substrate	Ferrous metals Non-ferrous metals
Surface preparation	Ferrous : Phosphatization or nanoceramic Non-ferrous: Chromatization or nanoceramic
Surface cleaning	The performance of this product is related to the degree of surface preparation. The surface must be clean, dry and free of any contaminants. Completely remove oils, grease and fats.
Thickness	60 µm - 80 µm
Cure conditions	10 min à 180 °C (metal temperature).
Cure windows	15 min - 25 min at 170 °C 10 min - 20 min at 180 °C 7 min - 15 min at 190 °C 5 min - 12 min at 200 °C
Application system	Electrostatic spray gun corona

NOTE:

For non-ferrous metals phosphatizing, please contact our technical service.



CHARACTERISTICS OF APPLIED PRODUCT

Test	Specification/Standard
Adhesion	Maximum GR0 (ASTM D3359)
Gloss 60°	20 - 30 (ASTM D523)
Impact	Minimum 50 kg.cm (ASTM D2794)
Flexibility (conic mandrel)	Maximum 3,00 mm (ASTM D790)

CHEMICAL RESISTANCE CHARACTERISTICS

Test	Specification/Standard
Humidity	Minimum 2000h (ASTM D2247)
Salt spray	Minimum 1500h (ASTM B117)

NOTE:

In the chemical resistance tests, the substrate used was cold-rolled steel sheet with tricationic phosphate. The mechanical resistance tests were performed on degreased common. The tests for UL certification were carried out on sheets of cold-rolled steel and hot-rolled steel substrate, with iron phosphate treatments and nanoceramics. Both single-layer and two-layer paint systems were evaluated using the products Politherm 22 R UL and Politherm 29 R UL. In the two-layer system, Politherm 22 R UL was used as a coating, followed by a finishing layer with Politherm 29 R UL. The test conditions included tests of moisture resistance in controlled atmosphere containing carbon dioxide (CO₂), sulfur dioxide (SO₂) and air as per UL specification with a minimum requirement of 1200 hours. Salt fog tests were performed according to ASTM B117 standard, with a minimum requirement of 600 hours.

SAFETY PRECAUTIONS

Guidance is available in the product's Safety Data Sheet (SDS).

NOTE

The POLITHERM 22 R is UL certified for both single-layer and two-layer paint systems. The two-layer system consists of POLITHERM 22 R UL and POLITHERM 29 R UL.

When the product is used as a primer with subsequent application of a finishing layer, it is recommended to undergo a 5-minute curing process at 160 °C in order to ensure proper adhesion between layers.

The mean cure can be performed under different time and temperature combinations, as long as it is kept within the range of 150 °C to 180 °C. Values outside this range may compromise the final performance of the system.

Do not exceed a period of 48 hours between the application of the primer and the finishing layer, as this may adversely affect adhesion between layers.

Simultaneous curing of parts with different metal masses is not recommended. The conditions required for the "half cure" of higher mass parts can lead to overcopolation in thinner parts, generating adhesion defects.

Tampering with parts must be avoided. If necessary, this should be done using fiber-free gloves to prevent surface contamination.

Applications must be validated by the client based on their actual process conditions, in order to ensure adequate performance of the coating system.

The information provided herein is based on our testing and experience and is intended to inform you about the product and its possible applications. The information provided in this bulletin is not intended to be complete, and the user assumes the risk of using the product for a purpose other than the specifications recommended in this bulletin without first obtaining our written confirmation of its suitability for the intended purpose. While we strive to ensure the accuracy of the information provided herein, we cannot control the quality or condition of the substrate, nor any other factors that affect the use and application of this paint. Therefore, unless we agree in writing to any condition that deviates from our recommendations, we accept no liability that may arise regarding the performance of this product. The information contained in this bulletin is subject to change without notice, based on our experience and policy of continuous development.