

POWDER COATINGS FOR HIGH TEMPERATURE APPLICATIONS.

EXATHERMA and **SILICHROME** series:
formulated for the protection of metal components
meant to achieve high temperatures,
with peaks up to 500°C.



Powder coatings with high thermal resistance are becoming more and more attractive for many end-users. **Their application covers a wide range:** from heater components to exhaust manifolds, from fireplaces to any item subjected to very high temperature.

Our EXATHERMA series withstands very high temperatures, up to 500°C; perfect for applications on wood burning stoves and pipes, that need to reach high temperatures and, at the same time, be aesthetically attractive.

Based on a **proper balance** between a resin characterized by a high thermal resistance and a resin which strong point is the chemical resistance, this series **allows to reach high standards also in terms of corrosion resistance.**

The unique thermal resistance properties of the EXATHERMA series are based on the characteristics, mutual interactions and quality of the powder coating components.

These coatings have been **specifically formulated** for protecting metallic components meant to achieve high temperatures – 250 to 350°C, with peaks up to 500°C.

The **coatings' polymerization** requires an item to stay at least at 200°C (item temperature) for 30 minutes. A higher curing temperature (230°C) can improve the mechanical properties of the coating film and its adhesion to the substrate. The adhesion properties of the EXATHERMA series are influenced by the thickness of the applied film, the kind of support and the type of pre-treatment. While applying the product, we recommend not exceeding a thickness of 40 microns.

Thermal stability test of a black EXATHERMA finish on bonder panels of iron phosphate WH/60/0C

350°C x 24 hours	ISO 7724-3	Delta E ≤ 5
350°C x 48 hours	ISO 7724-3	Delta E ≤ 7
350°C x 96 hours	ISO 7724-3	Delta E ≤ 10
500°C x 1 hour	ISO 7724-3	Delta E ≤ 10

The biggest limit of these powder coatings is the colour tone: generally, they are made in **black shades** or, at most, in dark grey ones.

Our **SILICHROME** powder coating has been developed to overcome this colour limitation: it is a new **coloured silicone-based powder coating for high temperatures.**

Now this series includes eight different shades, but in the next future it could be extended with some more.



The general and the thermal resistance characteristics of the SILICHROME series are summarized below. According to the coating's curing cycle, the items should remain at 200°C at least (object's temperature) for 30 minutes. A higher curing temperature (230°C) can improve the mechanical properties of the coating film and its adhesion to the substrate.

COLOUR	DELTA E 500°C x 1h	DELTA E 350°C x 96h	FINISHING	CURING CYCLE
Grass green	8,42	5,24	Light texture	200°C x 30'
Lemon yellow	4,28	3,2		
Ocher yellow	3,17	1,21		
Oxide red	4,39	1,67		
Cobalt blue	17,39	11,84		
Brick red	4,82	3,24		
Brown	5,68	3,37		
Pastel green	4,86	3,05		

Warning: the substrate adhesion is strongly influenced by film thickness, substrate type and pre-treatment type. These powder coatings should be applied with a thicknesses **not exceeding 40 microns.**

Warning: SILICHROME powder coatings cannot be over-coated because of weak intercoat adhesion.

EXATHERMA E SILICHROME POWDER COATINGS ARE AVAILABLE IN THESE VERSIONS:

FINISHING	BRIGHTNESS	COLOURS
Fine texture	Matt	
Available also in Metallic version and in Marble and Bronze effects.		

To be used only in open environments.

CONTACT US.

For any questions relating to powder coatings, our team is at your side to help and advise you.



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P o w d e r C o a t i n g s

M O R E T H A N C O L O U R

