Thermofix PS 02

ENG

Polyolefin composition blend for fluidized coating wire program.

General Features

Thermoplastic powder Thermofix® has been specifically developed to ensure the protection of the steel surface. Properties have been achieved thanks to the special composition based on modified polyolefins. Thermofix® has excellent mechanical strength, resistance to chemicals, salt and pollution in the air. Thermofix® has excellent adhesion to metal. It provides a high degree of electrical insulation, abrasion resistance and impact resistance. UV stabilization for outdoor use is optional.

Thermofix® is typically used in a Fluid Bed Powder Coating process, which involves dipping preheated metal parts into a fine powder suspended in an air chamber. Fluid Bed process is used when uniform and drip-less coating is required. This method is very efficient and low cost.

Product specification sheet KPE 25

Powder coverage	3 m2/kg at 350 µm
Particle size	90% less than 300 µm
Density	0,93 g/cm3
MFI 190 ºC, 2,16 kg	24 - 32 g/10´
Fluidity	high
Melting point	105 °C

How to Use

Pretreatment:
The steel surface must be cleaned of grease and other impurities with technical petrol. For better adhesion of the material is recommended to slightly roughen the surface.

Coating:
It is recommended to preheat the metal to a temperature of 280-350° C. Because the preheated metal cools after removing from the oven, it is important to minimize the distance oven - fluid bath. The hot metal is immersed in the powder for 8-10 seconds. Extending the time will not improve the coverage.

For thin layer applications it is suggested to second heat the product after the powder application to temperature of 170-180° C.

The recommended temperatures might need adjustment for specific products, however, the adhesion of the powder is ensured only at temperatures above 150° C. Overheated material can cause color instability.

Cured film properties

Recommended film thickness		300 - 1000 µm
Gloss	ISO 2813	70
Neutral Salt Spray test	cross-sectioned surface (X)	loss of film adhesion less than 10 mm from the cut corrosion under layer of 2-3 mm
	undamaged surface	no adhesion loss no signs of corrosion
Chemical resistance	- acids and alkali - salts /except peroxide/ - solutions 60 °C	good good good
Adhesion		excellent

Quality guarantee:
The whole production process is carried out under strict quality control standard per ISO 9001:2000.

Application Method

Thermofix® is typically used in a Fluid Bed Powder Coating process, which involves dipping preheated metal parts into a fine powder suspended in an air chamber. Fluid Bed process is used when uniform and drip-less coating of 300 – 600 microns is required. This method is very efficient and low cost.

Thermofix® PS 02 was formulated especially for coating of wire-based products, such as wire baskets and shelves for domestic or industrial use, like for refrigerators and freezers:

- excellent coverage in problem areas like corners, joints, sharp edges
- lower powder and energy consumption. In many cases, customers notice up to 20% less material consumption with Micromill powder than with their original powder.
- attractive looking surface that provides long-term protection
- certification for contact with the food
- surface does not crack peel

Major advantage of the fluid bed method is a waste-free 100% usage of the powder, which is either melted onto the product or remains in a bath. The ability to coat several products at once by immersion in a fluid bath makes this method very efficient. Truly low-tech technology that does not require a lot of interventions or adjustments.