



# **Thermofix KPE 10**

**ENG**

Thermoplastic PE powder for fluid bath coating.

## 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 10**

<b>Powder coverage</b>	3 m <sup>2</sup> /kg at 350 µm
<b>Particle size</b>	90% less than 300 µm
<b>Density</b>	0,93 g/cm <sup>3</sup>
<b>MFI 190 °C, 2,16 kg</b>	24 - 32 g/10'
<b>Melting point</b>	112 °C
<b>Fluidity</b>	high

## 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

<b>Recommended film thickness</b>		300 - 1000 µm
<b>Gloss</b>	ISO 2813	70
<b>Neutral Salt Spray test</b>	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
<b>Chemical resistance</b>	- acids and alkali - salts /except peroxide/ - solutions 60 °C	good good good
<b>Adhesion</b>		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.

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.