

The method for flame spraying thermoplastic powders provides to heat the article to be coated at a suitable working temperature and to feed the said thermoplastic powders transported by an inert gas through inlet (4), a flow of compressed air or nitrogen through inlet (5) and a flow of liquefied petroleum gas through inlet (6), then through respective separated discharge chambers (7, 9, 12) shaped inside a mixing device (1) of a spray gun. The thermoplastic powders are then projected, in a resulting flow (30), on the heated surface of the article to be coated, to determine the melting of the same powders at their contact with said heated surface. At least one couple of flows (31, 32) of compressed air is sprayed converging towards the resulting flow (30) flowing out of the mixing device (1), giving the resulting flow (30) a substantially flattened fan shape. The converging flows (31, 32) of compressed air are sprayed by inclined passageways (17, 18) located between a first ring of compressed air nozzles (13) and an outside ring of fuel nozzles (14).