

Ink Composition For High-Speed Screen Printing, Printed Matter Produced By the High-Speed Screen Printing of the Ink Composition, and Method For Producing the Printed Matter

[NAME OF DOCUMENT] ABSTRACT

[Abstract]

[Problem]

In recent years, high-speed screen printing using cylinder presses is being carried out with a greater variety of designs for printed matter, not only for graphics decoration but also for high-speed screen printing onto electric and electronic parts, as well as increasing high definition of printed images, and demand is increasing for more convenient and lower cost and more rapid production of printed matter comprising both fine patterns and wide-area solid patterns. Also desired is higher quality and higher definition of the visibility of printed images that comprise both fine patterns and solid patterns, by improving the sharpness of the image edge sections in solid patterns while also obtaining a satisfactory leveling property.

[Solution Means]

An ink composition for high-speed screen printing, which is an ink composition for high quality/high definition high-speed screen printing that, when producing printed matter by high-speed screen printing onto an object to be printed using a screen printing plate made by flat working a photosensitive emulsion film on a 355 mesh/inch polyester mesh printing plate, at a squeegee speed of 400 mm/sec, produces printed matter with

a printed image edge spreading width of no more than 10 μm from the printed image design dimensions of the printing plate, the ink composition for high-speed screen printing containing a solvent with a boiling point of not less than 170°C at not less than 70 wt% of the total solvent, and a prepolymer or polymer with a weight-average molecular weight of not less than 2000 at not less than 7 wt% with respect to the total ink composition, and having a viscosity of not less than 6 Pa·s and less than 30 Pa·s as measured with a BH-type rotating viscosimeter at 25°C, and a thixotropic index (TI value) of 2.0 to 8.0, the measured flow radius value of 14.0 to 24.0 mm after 1 minute from the start of measurement by a flow property measuring method using a spread meter at 25°C according to JIS K5701-1:2000.

[No Fig.]