[NAME OF DOCUMENT] CLAIMS

[Claim 1]

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 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.

[Claim 2]

The ink composition for high-speed screen printing according to Claim 1, wherein the ink composition satisfies "F60" - "F45" ≦ 0.8 mm, where "F60" is defined as the measured flow radius value after 1 minute and "F45" is defined as the measured flow radius value after 45 seconds from the start of measurement by the flow property measuring method using the spread meter.

[Claim 3]

The ink composition for high-speed screen printing according to Claim 1 or 2, wherein the solvent with a boiling point of not less than 170°C is either a DBE (dibasic acid ester) or isophorone, or a combination thereof.

[Claim 4]

The ink composition for high-speed screen printing according to any one of Claims 1 to 3, wherein the prepolymer or polymer with a weight-average molecular weight of not less than 2000 is an acrylic resin, a copolymer resin of vinyl chloride and vinyl acetate, a polyester resin or an epoxy resin, or a combination thereof.

[Claim 5]

The ink composition for high-speed screen printing according to any one of Claims 1 to 4, wherein the ink composition contains at least one coloring material, extender pigment and

filler, or a combination thereof, the coloring material, extender pigment and filler are dispersed in the ink composition with a mean particle size of no greater than 35 μm.

[Claim 6]

The ink composition for high-speed screen printing according to any one of Claims 1 to 5, wherein the ink composition is to be printed on a sheet-like or film-like base material selected from among art paper, coated paper, synthetic paper, polyester resin, polycarbonate resin, acrylic resin, polypropylene resin, polyethylene resin, vinyl chloride resin and glass, as the base material object to be printed.

[Claim 7]

A printed matter produced by the high-speed screen printing onto an object to be printed using the ink composition for high-speed screen printing according to any one of Claims 1 to 6.

[Claim 8]

A method for producing printed matter, wherein printed matter is produced by the high-speed screen printing ink composition for high-speed screen printing according to any one of Claims 1 to 6.

CLAIMS

[Claim 1]

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 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, which is selected from one or two more of solvent among isophorone, a dibasic acid ester (DBE), 3-methoxy-3-methylbutanol, 3-methoxy-3-methylbutyl acetate, ethyleneglycol monobutyl ether acetate, coal tar naphtha with a boiling point of not less than 170°C, diethyleneglycol monoethyl ether, diethyleneglycol monoethyl ether acetate, diethyleneglycol monobutyl ether, diethyleneglycol monobutyl ether acetate, triethyleneglycol monobutyl ether, triethyleneglycol monobutyl ether acetate, 1,6-hexanediol di(meth)acrylate, dipentaerythritol hexa(meth)acrylate, a vinyl ether monomer, amide monomer, 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,

and wherein the ink composition satisfies "F60" - "F45" ≦ 0.8 mm, where "F60" is defined as the measured flow radius value after 1 minute and "F45" is defined as the measured flow radius value after 45 seconds from the start of measurement by the flow property measuring method using the spread meter.

[Claim 2]

The ink composition for high-speed screen printing according to Claim 1, wherein the prepolymer or polymer with a weight-average molecular weight of not less than 2000 is an acrylic resin, a copolymer resin of vinyl chloride and vinyl acetate, a polyester resin or an epoxy resin, or a combination thereof.

[Claim 3]

The ink composition for high-speed screen printing according to Claims 1 or 2, wherein the ink composition contains at least one coloring material, extender pigment and filler,

or a combination thereof, the coloring material, extender pigment and filler are dispersed in the ink composition with a mean particle size of no greater than 35 μm.

[Claim 4]

The ink composition for high-speed screen printing according to any one of Claims 1 to 3, wherein the ink composition is to be printed on a sheet-like or film-like base material selected from among art paper, coated paper, synthetic paper, polyester resin, polycarbonate resin, acrylic resin, polypropylene resin, polyethylene resin, vinyl chloride resin and glass, as the base material object to be printed.

[Claim 5]

A printed matter having ink layer of the ink composition for high-speed screen printing according to any one of Claims 1 to 4.

[Claim 6]

A method for producing printed matter, wherein printed matter is produced by the high-speed screen printing ink composition for high-speed screen printing according to any one of Claims 1 to 4.