TEL: 886-7-6962211~3 http://www.sanho.com.tw FAX: 886-7-6976993 (Sales) E-mail: sanho@sanho.com.tw FAX: 886-7-6961782 (Export) E-mail: sanho@so-net.net.tw

KINGMIDE 550-A

1: Major Characteristics

KINGMIDE 550 is a solid type fatty polyamide resin synthesized by a polycondensation of mainly the dimerized fatty acid and the alkylenepolyamines. The major applications of KINGMIDE 550 are in the rotogravure printing inks $\,^\circ$

KINGMIDE 550 shows superior adhesion onto wide variety of surface so that it is highly useful for rotogravure ink formulation .The followings are the major characteristics of the KINGMIDE 550 as used in a rotogravure ink

- (a). Good solubility into various conventional industrial solvents.
- (b). Superior adhesion onto many kind of substrates.
- (c). Good wetting(=dispersion,)of the pigments and dyestuffs.
- (d). Good resistance to water, oil and chemicals..
- (e). Fast release of the solvent from the printed film..
- (f). Smooth and hard film surface with high gloss.
- (g). Smooth and hard film surface with high gloss, which is suitable for over-printings.

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2: Sales Specifications

Appearance : Brown Yellow Pellets.

Softening Point(Ball and Ring / $^{\circ}$ C) : 110 ±5 Viscosity (Gardner-Holdt / 25 $^{\circ}$ C) : D ~ G * Color (Gardner Hellige) : 10 max. Sp.Gr. (25 $^{\circ}$ C) : 0.98 Acid Value ($^{\circ}$ gr-KOH / gm) : <7 Amine Value ($^{\circ}$ gg-KOH / gm) : <3

*The solution viscosity of KINGMIDE 550 are of 50% solution in

Toluene/ IPA (7:3)

3: Solubility Data

| SOLVENT | KINGMIDE 550A | |
|--------------|-------------------|------------|
| | Resin content (%) | Solubility |
| Ethylalcohol | 40 | Gel |



SANHO CHEMICAL CO., LTD. NO. 1 CHUNG SHAN S. RD., LU-CHU, KAOSHIUNG, TAIWAN.

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| Ethylalcohol | 30 | Gel |
|---------------------------------|----|-----|
| | 20 | Gel |
| Isopropanol (I P A) | 40 | Gel |
| | 30 | Gel |
| | 20 | Gel |
| n-Butanol | 40 | I |
| | 30 | Е |
| | 20 | A |
| Ethylalcohol / Isopropanol=1: 3 | 40 | Gel |
| | 30 | Gel |
| | 20 | In |
| Ethylalcohol / Isopropanol=1: 1 | 40 | Gel |
| | 30 | In |
| | 20 | In |

^{*}The alphabets above are for the Gardner-Holdt Scale, at $20\sim22$ °C.

An optimum solvent release(=drying,) rate can be attained by the proper combination of the solvent.

4. Solution viscosity and low temperature stability

KINGMIDE 550A is dissolved at the 40% resin concentration in the mixed solvents of toluene and isopropanol (IPA) blend at several different ratios. Each varnish was then subjected to the designed temperature for 24 hours, and solution stabilities under low temperature were observed;

| | Bubble Viscosity(25°C Gardner-Holdt) | Stability |
|----------------------|--------------------------------------|-----------|
| Solvent system ratio | | 5℃ |
| 8 / 2 | M~N | F |
| 6 / 4 | Q | F |
| 4 / 6 | J | F |
| 2/8 | С | F |

F:Remains in solution form(fluid)

^{*}In = Insoluble, Gel =Gelled.