

## GLE(NS) /QGLE(NS) Lens Ink

**Feature:** High ink layer gloss, fineness uniform, good printability, good leveling property, outstanding adhesion of cured ink to polar base material, high ink film hardness, gloss and good resistance to water resistance and chemicals; white ink resists UV yellowing and prevents IR migration.

Si-containing GLE has outstanding better printability and base material adaptability, and Si-free GLENS has better leveling property.

**Application:** Tempered PMMA, PC and PET sheets for cellphone, navigator, LED TV, etc., some plating materials, PET sheet, tempered glass, second ink cover for OGS.

**Environmental Feature:** 1. No intentional use of halogens (Cl, Br) in raw materials.

(Cl  $\leq$  900ppm, Br  $\leq$  900ppm, Cl+Br  $\leq$  1500ppm)

2. No benzene, toluene, xylene and cyclohexanone, etc.

3. Compliant with RoHS, etc.

**Physical Property:** screen mesh: 120-165 T (Excluding the ink containing gold, silver, or pearl pigments)

Drying time: 70-160°C 30-120 minutes

Thinner: S-3 standard, GLE-258 spray thinner

Cleaner: S-186 (mesh cleaner)

Curing agent: GL-002, GL-001A; Consumption 10%

Sealing agent: GL-262; Consumption: 3-5%

Deformer: XC3-240; Consumption: 0.5-1%; used in Si-containing GLE, and added if required

Leveling agent: XC3-229; Consumption: 0.5-1%; used in Si-containing GLE, and added if required

Deformer: LS039; Consumption: 0.5-1.5%; used in Si-free GLENS, and added if required

Leveling agent: RJ071; Consumption: 0.5-1%; used in Si-free GLENS, and added if required

### Performance Parameter:

1	Adhesion	1m/m × 1m/m × 100 cross cutting test, ok
2	Pencil hardness	≥3H
3	Solvent resistance	500 g alcohol 100 次, OK
4	Acid resistance	5% sulphuric acid spotted on ink film for 24 hours, OK
5	Base resistance	5% NaOH spotted on ink film for 24 hours, OK

Color matching system: Only the inks in this series can be used for color matching. No other ink is used.

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### Color Code and Feature:

Color Code	Ink Name	Coverage	Light resistance level	Color transfer for re-printing	Feature
1100	Varnish	--	--	--	
1100L	Highly viscous transparent	--	--	--	Specially made for pigment inks.
1100M	Semi-glossy Transparent	--	--	--	Gloss reduced
1004(HA/HB)	White	High Coverage	6	--	
1005(H)	Super	High Coverage	2	--	Fluorescent white
2006	Lemon Yellow	Good Coverage	7	Outstanding	
2003	Original Yellow	Good Coverage	6-7	Outstanding	
2009	Mid yellow	Coverage	7	Outstanding	
2009T	Mid yellow	Highly Transparent	7	Outstanding	For metal color matching
3001	Rose red	Transparent	7	Outstanding	
3002	Deep red	Good Coverage	6	Good	
3005	Orange red	Good Coverage	7	Outstanding	
3005T	Orange red	Highly Transparent	7	Outstanding	For metal color matching
3008	Peach red	Transparent	7	Outstanding	

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4001	Violet	Highly Transparent	7	Outstanding	
4004	Super  blue	Good Coverage  m a r i n e	6	Outstanding	
4008	Blue	Transparent	7	Outstanding	
5001(H/HA/HB)	Black	Good Coverage	7	Outstanding	No spark 1000V > 11GΩ
5002	Black	Good Coverage	7	Outstanding	No spark 1000V > 11GΩ
BM1	White	Moderate	7	Outstanding	Matt, high surface tension ≥40
BM2C/D	High dyne	Coverage  b l a c k	7	Outstanding	No spark 1000V > 11GΩ; Matt, high surface tension ≥40
BM2P	High dyne	Coverage  b l a c k	7	Outstanding	No spark 1000V > 11GΩ; Matt, high dyne, spray

**Use Method:** (1) GLE(NS) ink shall be used along with curing agent and sealing agent. For example, 10 g of GL-002 curing agent and 3-5 g of GL-262 sealing agent are added to 100 g of GLE(NS) -5001;

(2) Before use, this ink shall be well mixed with curing agent and sealing agent at the specified ratio for about 10 minutes;

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(3) 5%-15% thinner is added under agitation if required;

(4) For multi-color printing on reinforced PMMA, PC, PET sheet, some plating silver, and PET sheet, surface drying at 60 °C -80 °C for 10 minutes is followed by next printing; finally the inks are baked at 70 °C -80 °C for 30-120 minutes. For multi-color printing on reinforced glass, surface drying at 140 °C -160 °C for 10 minutes is followed by baking at 150 °C -180 °C for 20-30 minutes;

(5) Si-containing GLE: In case of no good deforming effect on this ink, 0.5%-1% of XC3-240 deforming agent is added; in case of slightly oily dirt or poor leveling property on the base material, 0.5%-1% of XC3-229 leveling agent is added;

Si-free GLENS: In case of no good deforming effect on this ink, 0.5%-1.5% of LS039 deforming agent is added; in case of poor leveling property, 0.5%-1% of RJ071 leveling agent is added;

(6) Any blocked mesh can be cleaned with thinner. No printing begins till complete volatilization of solvent;

(7) No other ink is used.

**Precaution:** (1) Recommend a printing test before batch printing;

(2) The surface to be printed need to be clean for the printing process, or pinhole and shrinkage hole will occur;

In case of shrinkage hole occur during use of Si-free GLENS, recommend Si-containing GLE;

(3) The ink containing curing agent and sealing agent must be used up within 4 hours at 25 °C and 65% humidity;

(4) Static electricity on the surface to be print will lead to pinholes after screen printing;

(5) High humidity will influence the printing effect;

(6) Curing agent and sealing agent always react with water, so the package must be sealed after use in order to prevent deterioration resulting from water entry from air.

(7) Si-containing GLE and Si-free GLENS shall not be used together for color matching.

**Storage:**

GLE(NS) ink has the shelf life of 1 year.

**Dangerous Substance** Class 3 Dangerous Substance (flammable liquid)

**Safety Protection:** (1) To protect skin and eyes, please wear protective gloves and goggles. In case of skin contact with ink, please wash with soap and water thoroughly. In case of eye contact, please rinse with a lot of clean water immediately and then seek medical advice.

(2) The product is stored and used in a place far from fire source. The container is closed and stored in a well-ventilated place from sunlight after use.



SOLVENT BASE

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(3) For details, see MSDS.