

**Liquid photoimageable solder mask
(KSM-S6188KG26)**

KSM-S6188KG26 is two-component , screen printing , high precision , lye-development solder mask ink. It is applicable to double-sided board and multi-layer board for making thin and intensive circuit. It has good screen printing adaptability and good surfacing. The post cured film provides excellent adhesion , resistance to chemicals and heat.

Properties of Ink

Items	Features	Notes
Color	Medium green	
Fineness	$\leq 8\mu\text{m}$	0 ~25 μm Fineness gauge
Mix ratio	Base/Hardener=3:1	Weight ratio
Solid content after mixing	75 \pm 3%	Surface printing ink
Viscosity after mixing (25 $^{\circ}\text{C}$)	200 \pm 30 dPa · s	VT-04F
Density after mixing (25 $^{\circ}\text{C}$)	1.30 ~1.50 g/ml	
Pot life after mixing	24 hour	Store below 25 $^{\circ}\text{C}$ in dark
Environment standard	In compliance with RoHs directives	SGS testing
Pre-baking limit	75 $^{\circ}\text{C}$, 70 min	
Exposure energy	300 ~600 mJ/cm ²	The effective value through the polyester film
Package	Base :750g , Hardener :250 g	According to customer requirements
	Base :3kg , Hardener :1kg	
Shelf life	6 months since the date of manufacture	Store 10~25 $^{\circ}\text{C}$ in dark

Properties of the film (after post cured)

Items	Features	Notes
Pencil hardness	$\geq 6\text{H}$	Pencil harder
Solvent resistance	Good	25 $^{\circ}\text{C}$, C ₂ H ₅ OH , 20min
Acid resistance	Good	25 $^{\circ}\text{C}$, 10vol%H ₂ SO ₄ ,20min
Alkali resistance	Good	25 $^{\circ}\text{C}$, 10vol%NaOH ,20min
Insulation resistance	$\geq 1.0 \times 10^{12} \Omega$	IPC-SM-840D 3.8.2
Resistance to molten solder	288 $^{\circ}\text{C}$ \times 10secends \times 3times OK	IPC-SM-840D 3.7.3
Resistance to flame	UL94V-0	Certified number:UL-E189612

Attention :

1. The base and hardener should be mixed according to the ratio and stirred thoroughly before using.
2. We will offer you special diluent or DPM if the ink need dilute.
3. The values above are based on experiments in our lab. Experiments need to be carried out in order to get proper using condition.

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Directions of use

1. Working procedure

Procedure	Content
(1) Mixing	Mixing a small amount main agent with hardener and stirring thoroughly, then mixing the mixture above with the remanent main agent , add appropriate diluent and stirring 5 ~10 minutes. The viscosity of ink is adjusted to 120 ± 20 ps if printed by hand. And it is adjusted to 180 ± 20 ps if printed by machine. it is adjusted to 200 ± 40 ps if it is aluminum tamponade .The viscosity of ink mixed above is measured at 25 °C . Please use the special diluent of our company if the viscosity of ink needs to adjust.
(2) Remain time	10 ~15 minutes after stirring uniformly
(3) Screen mesh	Ordinary boards:43T ; Chemical-plating Aurum or Tin boards:36T
(4) Pre-baking	1. Single side printing separately First side :72 ~76°C ,15 ~18min Second side : 72 ~76°C , 30 ~35min 2. Double sides printing simultaneously : 72 ~76°C , 30 ~50min
(5) Exposure	300 ~500 mJ/cm ² , Black ink :600 ~750 mJ/cm ² (the effective value through the polyester film)
(6) Developing	Developing solution :0.8 ~1.2wt%Na ₂ CO ₃ or K ₂ CO ₃ aqueous solution Developing solution temperature :28 ~32°C Spray pressure :1.5 ~2.5 kg/cm ² Developing time :40~90 seconds
(7) Post cure	Spray Tin board :150°C × (60 ~120) min Chemical-plating Aurum board:150°C × (45 ~55) min Thick copper plate , boards printed with black ink should be post-baked in subsection:75°C × (60 ~120) min+100°C × 30 min+150°C × (60 ~90) min