



HYSOL[®]

Legend Inks

50-000 SERIES CAT-L-INK

TECHNICAL INFORMATION

1.0 DESCRIPTION

HYSOL[®] 50-000 Series Cat-L-Ink is a permanent, two-component epoxy-based screen printing ink. These legend inks may be used with a selection of catalysts which cure at elevated and/or room temperatures. When properly applied and cured, Cat-L-Ink has excellent adhesion to conventional and UV-curable solder resists, glass, plastics and metals. HYSOL 50-000 Series is extremely resistant to acids, alkalis, solvents, salt-spray and thermal shock. HYSOL 50-000 Series Cat-L-Ink is used in the electronics, aerospace, automotive, appliance and decorative container industries. Uses include the permanent marking of circuit boards, dials, nameplates, components, edge-lit panels, chassis, glass and thermoplastics.

2.0 COLOR NUMBERS AND MIX RATIOS

Numbers	Color	Recom- mended Catalyst	Mix Ratios	
			Catalyst additions parts by weight per 100 parts ink	
			All Catalysts (except 5)	Catalyst 5 only
50-100R	White	*	6.0	9.0
50-110RX	Flat White	9	5.0	NR
50-120R	Hi-Hide White	*	4.5	6.5
50-200AR	Primrose Yellow(Cadmium)	*	6.0	8.5
50-201AR	Lemon Yellow(Cadmium)	*	6.0	8.5
50-202BR	Medium Yellow(Chromium)	*	6.0	9.0
50-206R	Orange(Yellow)	*	6.0	8.5
50-300R	Emerald Green ³	*	6.0	8.5
50-301R	Deep Green	*	7.0	9.5
50-400R	Ultramarine Blue	*	6.5	9.0
50-403R	Light Blue ³	*	6.0	9.0
50-407R	Medium Blue ³	*	7.5	9.0
50-506BR	Deep Red	*	6.0	10.5
50-507R	Medium Cadmium Red	*	6.0	8.5
50-508R	Medium Red	*	6.5	10.0
50-600R	Chocolate Brown ³	*	7.0	9.0
50-700R	Black	*	7.0	10.5
50-710R	Flat Black ¹	*	4.0	NR
50-770R	Flat Black(Non-Conductive) ²	28	6.5	NR
50-771R	Gloss Black(Non-Conductive) ²	*	6.0	8.0
50-800R	Clear	*	9.0	12.0
50-810R	Flat Clear	*	6.0	8.5

1. Not intended for electrical applications
2. Intended for electrical applications
3. Color match only

3.0 CATALYST DESCRIPTION

Catalyst	Description	Cure	Avg. Pot Life* (Hrs.)
B-3	Low temperature curing catalyst. Cures @ 130°F for 3 hours. Higher cure temperatures decrease cure period.	HEAT	4
5	Long pot life. Excellent adhesion and heat stability properties. Special Mixing ratios are required (See 2.0).	HEAT	24+
9	Basic heat curing catalyst with good anti-yellowing resistance (Recommended use with HYSOL 50-110RX).	HEAT	7
20	Basic air curing catalyst. Curing at room temperature is achieved in 5-7 days. Tack-free after one to two hours. May also be heat cured.	R.T. or HEAT	2
28	Accelerated air curing catalyst. Cures at room temperature in 3 days. Shorter pot life.	R.T. or HEAT	1
45	Long Pot life. Adhesion promoting catalyst. Provides excellent adhesion to glass and metals with good water resistance. Adhesion promoters slightly decrease Cat-L-Ink's resistance to solvents.	HEAT	12
77	Adhesion promoting catalyst. Air curing version of catalyst 45. Cures @R.T. in 5-7 days. Maximum adhesion achieved by heat curing @ 66°C (150°F) or higher.	R.T. or HEAT	1

* at 21°C (70°F)

4.0 MIXING INSTRUCTIONS

4.1 **MEASURE INK AND CATALYST TO PROPER MIX RATIO** (Refer to 2.0): All catalysts should be added in as exact proportions as possible by weight. Both excessive and insufficient amounts of catalyst are detrimental to cured-ink film properties.

4.2 **MIX THOROUGHLY**
Stir from bottom of container.

4.3 **OBSERVE INDUCTION PERIOD:**
All Catalysts: 30 minutes (except Catalysts 5 and 45: 60 minutes)

Catalyst/ink mixtures must be allowed to stand for at least 30 minutes prior to application. This procedure provides an induction period ensuring a homogeneous mix of catalyst and resin and allows air bubbles to escape from mixture. Average pot life begins after induction period.

4.4 **APPLICATION:**
HYSOL® 50-000 Series inks can be applied by screen printing, spraying, brushing and roller printing.