



# HYSOL® Permanent Epoxy Marking Ink M-Series BULLETIN E

## TECHNICAL INFORMATION

### 1.0 DESCRIPTION

HYSOL® M-Series Wornow ink is a permanent, two-component, epoxy-based marking ink. These inks may be used with a selection of catalysts which cure at elevated and/or room temperatures. When properly applied and cured, M-Series ink has excellent adhesion to glass, metal, and thermosetting plastics. M-Series is extremely resistant to acids,

alkalis, solvents, chemicals, salt spray, thermal shock, and is qualified to MIL-I-43553, Revision A.

HYSOL® M-Series marking ink is used in the electronics, aerospace, automotive, appliance and decorative packaging industries. Uses include the permanent marking of semiconductor components, circuit boards, connectors, dials, nameplates, panels, chassis, glass, and thermoplastics.

### 2.0 COLOR NUMBERS AND MIX RATIOS

Ink Number	Color	Recommended Catalyst	MIX RATIOS	
			Catalyst additions parts by weight per 100 parts ink	
			ALL CATALYSTS (except 5)	Catalyst 5 only
M-1-N	Brown	*	5.0	8.8
M-2-N	Red	*	4.0	8.0
M-3-N	Orange	*	5.0	8.0
M-4-N	Yellow	*	5.0	7.0
M-5-N	Green	*	5.0	8.0
M-6-N	Blue	*	5.0	8.0
M-7-N	Violet	*	4.0	8.0
M-8-N	Grey	*	5.0	8.0
M-9-N	White	*	5.0	7.0
M-0-N	Black	*	4.0	8.0
M-0-NC	Inorganic Black	B-13	5.0	NR

\*Use any catalyst in Sec. 3.0

### 3.0 CATALYST DESCRIPTION

Catalyst	Description	Cure	Avg. Pot Life* (hours)
20/A	Basic air curing catalyst. Curing at room temperature achieved in 5-7 days. Tack-free after one to two hours. May also be heat cured.	R.T. or HEAT	2
B-3	Basic heat curing catalyst. Cures at low temperature @55°C (130°F) for 3 hours higher cure temperatures decrease cure period.	HEAT	4
5	Long pot life. Excellent adhesion properties. Special mixing ratios are required for this heat curing catalyst. (see 2.0).	HEAT	+24
B-13/28	Accelerated air curing catalyst. Cures at room temperature in 3 days. Recommended use with M-0-NC and M-12-N. Short 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. Decreases M-Series inks resistance to solvents.	HEAT	12
77	Adhesion promoting catalyst. Cures at room temperature in 5-7 days. Provides same basic characteristics as catalyst 45. Maximum adhesion achieved by heat curing @ 150°F-200° for 100 minutes.	R.T. or HEAT	1

\*@70°F