

**2020 ANNUAL LETTER OF QUALIFICATION
to
COMMERCIAL ITEM DESCRIPTION (CID)
A-A-56032, REVISION D
for
M-SERIES MARKING INKS**

This Letter of Qualification applies to all M-Series inks manufactured by MacDermid Enthone.

MacDermid Enthone M-Series inks are not color matched to FED-STD-595 and will not match the color numbers called out in Table II of this specification. The M-Series inks are approximate matches only to the Federal standard colors.

The undersigned certifies that MacDermid Enthone's M-Series inks are qualified to the requirements of CID A-A-56032, Revision D as follows:

Type I: All ink and catalyst combinations tested at the specified cure schedules.

Type II: All ink and catalyst combinations tested at the specified cure schedules
EXCEPT:

- M-0-N
- Inks cured at room temperature with Catalyst 20/A

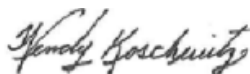
Type III: All ink and catalyst combinations tested at the specified cure schedules

The following ink/catalyst/cure schedule combinations were selected for testing. They are representative of the other colors in the series and comparable results can be expected.

INKS	M-9-N, M-0-N, M-0-NC
CATALYSTS	
Accelerated Air Cure	Catalyst B-13/28
Basic Air Cure	Catalyst 20/A, Catalyst 77
Heat Cure	Catalyst 20/A, Catalyst B-3, Catalyst 5, Catalyst 9, Catalyst B-13/28, Catalyst 45 and Catalyst 77
CURE SCHEDULES	
Accelerated Air Cure	3 days at room temperature (25°C/77°F)
Basic Air Cure	5-7 days at room temperature (25°C/77°F)
Heat Cure	15 minutes at 150°C/300°F

Air cure conditions can vary considerably (temperature, humidity, air flow, etc.). Also ink coating thickness has a greater impact on final properties when using air cures. When possible a low temperature heat cycle, followed by a full air cure, will ensure product performance. Please contact a MacDermid Enthone Technical Service Representative for additional information.

Product shelf life is warranted from the date of manufacture.



Wendy Koschwitz
Quality Assurance, January 7, 2020