

## Quick Drying Permanent Marker Inks With Excellent Cap-Off Properties

### General Information

Dokumental® MA 30xx series combines the intensity and excellent adhesion of Dokumental® MA 20xx series with enhanced cap-off properties (the cap-off time of the ink is up to two weeks under ISO 554 (23°/50%) conditions). The cap-off times strongly depend on colour, tip material, and surrounding conditions. Tests with the chosen tip material are recommended.

The inks are an ideal choice for all kind of permanent marking applications.

### Suitable Surfaces

For most smooth surfaces, papers and cardboards.

### Applicable Standards & Regulations on request

### Physical Data

Type	Colour	Viscosity at 20°C mPa s ± 0.5	Density g/cm <sup>3</sup> ± 0.02
Dokumental® MA 3000	blue	4.5	0.91
Dokumental® MA 3001	dark blue	4.5	0.91
Dokumental® MA 3010	black	6.5	0.94
Dokumental® MA 3011	black	4.5	0.93
Dokumental® MA 3012	black	5.8	0.92
Dokumental® MA 3020.1	red	4.1	0.94
Dokumental® MA 3021	red	4.5	0.92
Dokumental® MA 3031.1	green	4.8	0.92

### Technical Advice

#### Suitable Components

Nibs: polyester, acrylic

Reservoirs: polyester

Barrels: polypropylene, aluminium

corrosion tests are recommended in order to approve the compatibility with the different aluminium qualities available.

Caps, Plugs: polypropylene

It is mandatory to approve the compatibility of the ink and the components as well as the performance of the writing system.

### Storage, Handling & Transportation

Before use of our product the filling station has to be maintained and cleaned carefully. The inks are sensitive to any kind of contamination. Cross-contamination of the inks may lead to a colour mismatch or will even lead to a defective marker or shorter shelf life.

Store our product frost protected and avoid direct sunlight. The recommended storage temperature is between 10°C and 30°C. Storage temperatures of above 30°C for several days bear the risk of a reduced shelf life of the ink.

The shelf life of the inks in original sealed containers is 2 years.

After usage the drums have to be closed again tightly.

Horizontal storage of the markers is recommended in order to get the maximum shelf life.

CAUTION: the inks are classified as flammable liquids! For detailed safety information refer to the respective Material Safety Data Sheets.

### Packaging

standard packaging: 20kg plastic canister (further packaging units on request)

### Produced by

DOKUMENTAL GmbH & Co KG

Wöllnerstraße 26

D-67065 Ludwigshafen

Phone: +49(0)621/37702-200

Fax: +49(0)621/37702-391

Mail: [info@dokumental.de](mailto:info@dokumental.de)

[www.dokumental.de](http://www.dokumental.de)