

Technical Data Sheet

Dokumental® NFA 1/x Fibre Pen Inks

Water Based Fibre Pen Inks

General Information

The fibre pen inks of Dokumental® NFA 1/x series are available in a wide variety of colours and have the following features:

- Cap-Off Time of up to four weeks under ISO 554 (23/50) conditions in suitable components
- stains can be removed from most textiles (cotton, polyester, acrylic and nylon fibres and their blends) by normal laundry procedures at 60°C.
- washable from skin with soap and water

Suitable Surfaces

For all kind of papers

Physical Data

Type	Colour	Colour Chart	Surface tension mN/m ± 2.0	pH-Value	Density at 20°C g/cm ³ ± 0.02
Dokumental® NFA 1/931.1	black		32.0	5.0 - 7.5	1.05
Dokumental® NFA 1/931.1-o	grey		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/1010.1	violet		34.0	5.0 - 7.5	1.04
Dokumental® NFA 1/1005.1	dark blue		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/1003.1	blue		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/401.1	light blue		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/405.1	turquoise		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/406.1	dark green		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/412.1	light green		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/417.1-o	yellow		31.0	5.0 - 7.5	1.04
Dokumental® NFA 1/417.1	golden yellow		31.0	5.0 - 7.5	1.04
Dokumental® NFA 1/744.1	olive		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/429.1	orange		33.0	5.0 - 7.5	1.04
Dokumental® NFA 1/419.1	red		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/917.1	dark red		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/418.1	magenta pink		36.0	5.0 - 7.5	1.04
Dokumental® NFA 1/229.1-f	red brown		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/227.1	brown		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/267.1	light brown		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/284.1	yellow brown		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/332.1-o	pink		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/328.1-o	apricot		32.0	5.0 - 7.5	1.04
Dokumental® NFA 1/1700.1	fluo yellow		36.0	5.0 - 7.5	1.11
Dokumental® NFA 1/1712.1	fluo green		36.0	5.0 - 7.5	1.11

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Technical advice:

General Remarks:

Dokumental has tested the performance, long term stability and shelf life of the inks in the laboratory under typical terms of use in a limited number of writing systems. As there is a large variety of writing system components available on the market, Dokumental can NOT give a general guarantee for the inks in all writing systems. Therefore, it is mandatory to approve the compatibility of the inks and the components as well as the writing performance, long term stability and the shelf life of the inks in the customer's components. Important and decisive parameters are:

1. Climatic conditions: Temperature and Humidity
Especially exposure to high temperatures and high humidity may accelerate the aging of the ink in original ink drums as well as in the writing system. This may lead to reduced shelf life of the products. Therefore, long term stability and shelf life of the writing system must be tested thoroughly under those climatic conditions, which are expected during the storage time and the practical use of the writing system.
2. All materials, which get into contact (short term or long term) with the inks during processing and manufacturing of the writing instruments, like hoses, pipes, pumps, funnels, storage tanks, cleaning liquids etc.: All such contact materials may not release any contaminations to the inks. Contamination of the inks may lead to undesirable effects like performance loss and/or reduced shelf life.
3. All materials, which get into contact (short term and long term) with the inks in the writing system like tips, barrels, reservoirs, tubes, metal parts etc.: Long term oven test at elevated temperature (recommended is 40 to 50 °C) must be carried out to prove long term compatibility of all components and materials.
4. The inks contain biocides to prevent microbial growth. However for best protection we additionally recommend to ensure best hygienic conditions in pen production areas as well as proper cleanliness of all pen components.

Suitable Components

Nibs: polyester, acrylic, sintered polyethylene

The use of polyamide (Nylon) nibs is not recommendable due to possible colour changes

Reservoirs: polyester (the compatibility with acetate reservoirs must be tested in advance)

Barrels, Caps, Plugs: polypropylene, butadien-styrene, polyethylene

Storage, Handling & Transportation

Store our product frost protected and avoid direct sunlight. Recommended storage temperature for the product is between 10°C and 30°C. Storage temperatures 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 two years. Make sure that the drums are closed tightly after they were opened.

Applicable Standards & Regulations

Unless expressly agreed, no warranty is given that all standards & regulations relevant to the Customer's intended use have been and will be complied with. To the extent that compliance with certain standards & regulations is warranted, this warranty shall only apply at the time the underlying contract is entered into. There is no guarantee that the products will continue to comply with the standards & regulations in the event of future changes. Dokumental also assumes no obligation to inform the Customer of any changes to such standards & regulations that may be relevant to the Customer.

Packaging

20 kg plastic drum
200 kg plastic drum
1,000 kg IBC

Produced by

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