

EvoJet 1710 UV

EVOJET 1710 ink series is a reliable solution for use with print heads with 7pl definition and higher such as Ricoh GEN 4 & 5, Konica Minolta > 7pl, and others
EVOJET 1710 inks are classified "no CMR"

FEATURES

- EvoJet 1710 is a UV-curable ink jet suitable for the decoration market but also for all industrial printings such as packaging, direct printing on plastics and on a large variety of substrates such as PVC, Vinyl, banner, mesh, paper, canvas, styrene (no edge clipping), polycarbonate, Dibond®...
- EvoJet 1710 offers an expanded substrate compatibility through an improved and superior adhesion
- Very high cure speed
- Excellent image quality on a broad range of substrates
- Pre-treatment on difficult substrates will strengthen the adhesion
- High color gamut
- Pigment particle size is sub-micron defined for extra fine resolution and controlled dot gain avoiding a maximum of satellite over spray

INK PROPERTIES

Surface tension

26.5mN/m (+/- 0,5mN/m) at a temperature of 25 °C (Krüss K11 tensiometer)

Viscosity

Measures done at 45 °C/shear rate between 100 and 1000s⁻¹

Rheometer Anton Paar MCR 102

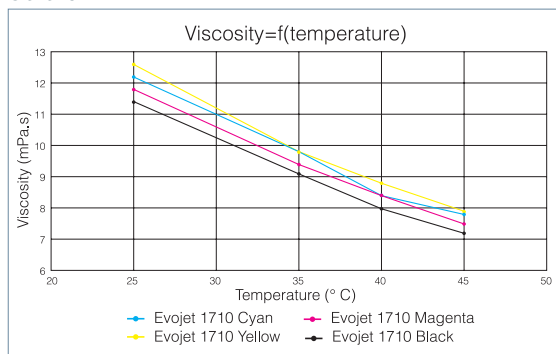
Cyan, Magenta and Black: 7 – 8 mPa.s

Yellow: 7,5 – 8,5 mPa.s

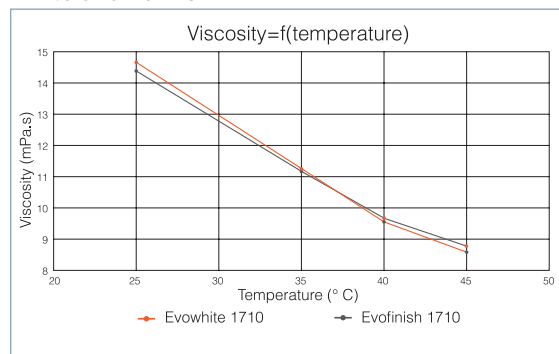
White: 8,5 – 9,5 mPa.s

Varnish: 8 – 9 mPa.s

Colors



White and Varnish



Particles sizes

For all colors, Di50<400nm and Di90<1000nm (Cordouan Vasco DL 135 particle sizes analyser)

Density at 25 °C (Krüss K11 tensiometer)

Cyan, Magenta and Black: 1.03 g/cm³

Yellow: 1.04 g/cm³

White: 1.16 g/cm³

Varnish: 1.06 g/cm³

CURING

All measurements have been carried out on our R&D laboratory equipment. It is recommended to validate on your digital machines the polymerization of the inks before running complete production.

Mercury lamps with a speed belt of 20m/min (measured with a Power Puck II)

- UVA (320-390nm): 110mJ/cm² // 380mW/cm²
- UVB (280-320nm): 100mJ/cm² // 350mW/cm²
- UVC (250-260nm): 30mJ/cm² // 110mW/cm²
- UVV (395-445nm): 90mJ/cm² // 310mW/cm²

Under laboratory conditions, curing is good at a speed of 40m/min

UV LED (Phoseon lamp FireJet 200 – 395nm – 16W/cm²)

All our colors cure at 8W/cm²

PRINTING PARAMETERS

- Temperature: 18 to 25 °C.
- Optimum humidity: 40 to 60% (without condensation).
- Operating humidity: 30 to 70% (without condensation).

Multipass printing

Jetting temperatures:

- about 33-38 °C for CMYK
- 38-42 °C for White
- 36-40 °C for Varnish

The temperature of the subtank and the print heads must be ideally the same.

MACHINE STOPPAGE

To avoid print head degradation, the inks should be flushed from the print heads before putting the printer at rest for longer time periods.

PACKAGING

All inks and solvents are available in 1L bottles

STORAGE

For optimum performances and durability EvoJet 1710 series must be stored under 30 °C.

Shelf life from date of manufacture is:

- All colors: 24 months
- White: 9 months
- Evoclean: 36 months

Always stir the ink well before use, especially the whites (risk of sedimentation during long-term storage).

INK CHANGE OVER

For optimal performances, it is recommended to thoroughly clean the ink system and jet assemblies with the appropriate flushing solvent dedicated to the ink left in the system, and then flush again with EvoClean flushing solvent to avoid contamination of the system and of the ink. It is highly recommended to replace all filters.

ENVIRONMENTAL, HEALTH & SAFETY

The vast majority of printing inks and related products formulated by Encres DUBUIT contain no substances of very high concern. Our products comply with the requirements of Directives 2011/65/EU (RoHS 2), 2015/863/EU (RoHS 3) and 94/62/EC (heavy metal concentration levels present in packaging). For more information about our regulatory compliance, please consult our Eco System document, available on request.

EvoJet 1710 ink series is formulated free of any volatile solvents. No use of Bisphenol A and epoxy derivatives listed in the Regulation (EC) N° 1895/2005.

Compliant with the following regulations:

- EuPIA Exclusion policy for printing inks and related products (3rd edition – November 2016)
- Regulations (EC) N° 1907/2006 (REACH) and (EU) N°1272/2013, (EU) N°2015/326 Annex XVII, Entry 50 – Polycyclic aromatic hydrocarbons (PAHs)



Tests conducted

Directive 2009/48/EC of the European Parliament and of the Council on the toys and its amending Regulation (EU) 2017/738 (EN 71-3:2013+A3:2018)	Pass
Regulation (EC) No 1907/2006 (REACH) and (EU) No 2017/2016, Annex XVII – Cadmium and its compounds	Pass
Regulation (EC) No 1907/2006 (REACH) Including the revision of 2018/2005 (EU) and (EC) No 552/2009, Annex XVII, Entry 51 and 52 - Phthalates	Pass
European Directive 2011/95/EU (RoHs) and (EU) 2015/863 – Certain hazardous substances in electrical and electronic equipment	Pass
ASTM F963-17 Standard Consumer Safety Specification on Toy Safety – Clause 4.3.5: Heavy Elements	Pass
CPSIA 2008 (Public Law 110-314) and its amending Act (Public Law 112-28) Title I – section 101. Children’s products – containing Lead; Lead paint rule	Pass
CPSIA 2008 (Public Law 110-314) and its amending Act (Public Law 112-28), Title I - section 108 and 16 CFR part 1307, Phthalates.	Pass
Canada Consumer Product Safety Act, Toys Regulations (SOR/2011-17) (Current to December 19.2016), section 23 – Heavy Metal	Pass
GB 6675.4 – 2014, Safety of Toys – Part 4: Migration	Pass

The complete details of these tests as well as other tests results are available upon request

Toy standard

In the current state of our knowledge, the EvoJet 1710 range meets the requirements of the 2009/48/EC Directive (Annex II, Part III: Chemical Properties) on toy’s safety. However, the presence of unintentional traces of unauthorized substances cannot be excluded. Finally, it should be noted that the toy manufacturer remains solely responsible for the compliance of the final items put on the market in view of the above directive and regarding the standard EN 71-3 - A3: June 2018.

No intended use:

- EvoJet 1710 is not intended for primary food packaging
- EvoJet 1710 has been specially formulated for digital printing; it has not been tested in any other method
Any liability for other use but digital printing is hereby disclaimed

For more information about our regulatory compliance, please consult our Eco System document, available on request.



PRODUCT OVERVIEW	
DESCRIPTION	ARTICLE CODE
EvoJet 1710 Cyan	BEVO41643L
EvoJet 1710 Light Cyan	BEVO42533L
EvoJet 1710 Magenta	BEVO41644L
EvoJet 1710 Light Magenta	BEVO42534L
EvoJet 1710 Yellow	BEVO41856L
EvoJet 1710 Black	BEVO41647L
EvoWhite 1710	BEVO41684L
EvoFinish 1710	BEVO41852L

MEASURING LIGHT FASTNESS

Light Fastness is usually measured by exposing ink prints under light radiation produced by Xenon tube in comparison with master prints. Those witness are called Blue Wool.

A standard blue wool textile fading test card is placed in the same light conditions as the sample under test.

A rating between 1 and 8 is awarded by identifying which one of the eight strips on the blue wool standard card has faded to the same extent as the sample under test

1 - denotes extremely poor colour fastness while 8 - is credited as being lightfast and permanent.



EVOJET PROCESS COLOURS RATING:

Evojet Process Colors	
Cyan	7/8
Magenta	7/8
Yellow	7/8
Black	8
Light Cyan	7
Light Magenta	6/7

These values mean that EVOJET inks are suitable for outdoor use for 2 years if placed vertically and referred to the middle European climate.

It is recommended to test the final print in real outdoor conditions.

The Light Fastness of a print is the result of the combination:
Ink light fastness + printing conditions + life cycle conditions

Encres DUBUIT guarantees the quality of our products. However, we cannot guarantee the final result, because we exercise no control over individual operating procedures. Our responsibility is limited solely to the exchange of ink or varnish. The quality of a substrate to be printed can vary, as well as an overprinted ink; therefore, the above information is given in good faith based on the state of our art and prior experience. This statement also applies to our technical assistance. When using our inks and varnishes on a new substrate or when changing operating procedures, we strongly recommend testing first a full-scale production to ensure compatibility. Please refer to our General Conditions of Sales.