PRODUCT DATA SHEET

GRAFIPRINT MEDIA FOR SOLVENT PRINTERS

REFERENCE GEF-ES

Released on 1st April 2018

Description

Grafiprint GEF-ES is a soft white matt environment-friendly chlorine- and plasticizer free Grafityp Ecology Film (GEF), provided with a special matt printable coating, which was developed to be used on all solvent printers (hard-solvent, mild-solvent, eco-solvent, …). The film is provided with a semi-permanent pressure-sensitive water-based acrylic adhesive. This adhesive is protected by a high quality clay-coated release liner.

Composition

Film :	150 µm thick white matt GEF (Grafityp Ecology Film) with a special printable coating (thickness incl. print coating)
Adhesive :	semi-permanent pressure-sensitive water-based acrylic adhesive.
Backing paper :	Clay-coated paper of 135 g/m²

Application

Grafiprint GEF-ES film is perfectly suited for all possible indoor applications and short- to middle-term outdoor applications on non-corrugated surfaces.

Certificate

- The product is perfectly safe when used indoors and contributes to a clean and safe living environment.
- "Class 1" BS 476 Part 7

Product Specifications

Technical properties at a relative humidity of 50 ± 5 % and a temperature of 23 ± 2°C.

		Test method	Result
1.	**Thickness[1]**		
	Thickness film	ISO 4593	110µm
	Thickness film + coating	ISO 4593	150µm
	Thickness film + coating + glue + paper	ISO 4593	310µm
2.	**Weight[1]**		
	Weight film	-	110 g/m²
	Weight film + coating	-	150 g/m²
	Weight film + coating + glue + paper	-	310 g/m²
3.	**Dimensional stability[2]**	Finat 14	< 0,2 mm
4.	**Degree of gloss**		
	Maximum (measuring angle 60°)	ISO 2813	7 GU (gloss units)
5.	**Adhesion strength[3]**		
	After 20 minutes	Finat 1	3 N/25mm
	After 24 hours	Finat 1	5 N/25mm
6.	**Quickstick[4]**	Finat 9	5 N
7.	**Expected outdoor life span [5]**	-	2 years laminated with a GEF laminate = 3 to 4 years
8.	**Temperature range**		
	At application	-	+10°C to +35°C
	At use	-	-5°C to +80°C
9.	**Colour back print**	-	Blank
10.	**Flammability** Product is flame resistant, officially certified as "Class 1" BS 476 Part 7 (equivalent to "B1")		

Storage instructions

All Grafiprint materials always need to be stored in their original packing and with the original protection flanges (and preferably stored vertically).
In order to avoid any loss of quality, the Grafiprint Solvent Film should also be stored in suitable conditions, that is at a temperature between 10 and 20°C, and a relative humidity of 50%. Under these conditions, the Grafiprint materials can be stored for a period of two years.

Remarks

We advise you to leave the low-volatile solvent prints to dry sufficiently before enrolling them or laying them on top of each other.
A Grafiprint laminate, which is always necessary in case the print will be exposed to mechanical friction, can prolong the life span considerably, and can give the print a high-gloss or matt effect.
As the colour of the film can differ slightly for each production run, we advise you not to use films with different batch numbers in one single and critical job. The number to be taken in to consideration for this purpose consists of the first 5 numbers of the 7-digit batch number.
The Grafiprint GEF-ES film is not suited for use on latex printers.

Recommended temperature settings

When printing on the Grafiprint solvent and low-volatile solvent media, the temperature settings of the printer are extremely important. Depending on the ambient conditions, the amount of ink and the requested print quality, we advise a pre-heater temperature of maximum 30°C. This temperature can be raised, on condition that the Grafiprint material stays completely flat. A too high temperature can lead to an inferior print quality and to colour differences, because the material will become soft, as a result of which it might get damaged by the transport wheels of the printer, and because the material will undulate, as a result of which it could touch the print head.
The same goes for the use of an after-heater (dryer). We advise an after-heater temperature that is no more than 5°C higher than the pre-heater temperature. But again, the material should not undulate as a result of a too high temperature setting.
In general, we can say the temperature of both heaters should be set as high as possible, without the material showing any form of undulation.

Important

The information, mentioned in this product data sheet, is based upon tests that were executed by Grafityp, and that we consider to be reliable. The information always represents an average, a minimum or a maximum value, and should be considered as such. It is only given for your information, and does not give any guarantee. It is up to the end user to decide whether or not the product is suited for his particular application.

1) The thickness of the Grafiprint materials may vary slightly. The indicated value is an average value, obtained from a series of measurements.
2) The dimensional stability is the shrinkage of the unprinted material in mm. This value is measured by applying the film on aluminium (100x100mm), and placing it in a hot-air oven at 70°C for 48 hours (= Finat 14 Method, adjusted according to our own internally developed procedure). The indicated value is a maximum value, obtained from a series of measurements.
3) The adhesion strength is measured on glass, and this after 20 minutes and after 24 hours. The film is removed again in an angle of 180° and at a speed of 300 mm/min. The indicated value is an average value, obtained from a series of measurements.
4) The "Quickstick" is the direct adhesion strength, measured on glass. The indicated value is an average value, obtained from a series of measurements.
5) The expected outdoor life span refers to outdoor use under Central European conditions and to vertical applications, and only refers to the film itself and its adhesive backing. However, this does not give any guarantee for the life of a printout, as this depends on too many other factors, such as the inks that are used. The expected life span of our films is based upon professional application on a dry, degreased and suitable background. Tropical conditions, or the use near chemical emission, may have a detrimental effect on the life span.

As the quality of your print does not only depend on the Grafiprint medium, but also on so many other factors (such as the printer, the quality of the inks, the print software, the ICC profile, the ambient temperature, the air humidity, etc…), Grafityp can not guarantee or be held responsible for the eventual print result.
The materials mentioned in our compatibility list have been tested under normal conditions and are purely indicative.
Subject to modifications.
For more detailed information we also refer to our general "Grafiprint Warranty Certificate" and to our "General Terms and Conditions of Sale and Delivery".