



## ImagiFLEX<sup>®</sup> LM

### Low Migration UV Flexo Dispersions

#### PRODUCT INFORMATION

<b>Product Name</b>	ImagiFLEX <sup>®</sup> LM
<b>Physical Appearance</b>	Coloured Viscous Pourable Liquids
<b>Purpose</b>	Manufacture of UV Curable Low Migration Flexographic Inks

These dispersions are supplied with accompanying let down and finishing starting formulations, enabling the inkmaker to formulate and manufacture finished UV Flexo Inks for the indirect or secondary packaging narrow web market.

ImagiFLEX<sup>®</sup> LM are formulated and manufactured using materials which have been chosen for their low odour and low extractable properties, and their compliance to the requirements of :

- 1 (EC) No. 1935/2004 (Materials and Articles intended to come into contact with food)
- 2 (EC) No. 2023/2006 (GMP - Good Manufacturing Practice for Materials and Articles intended to come into contact with food)
- 3 Swiss FOPH Ordinance SR817.023.21
- 4 EuPIA Guidelines - Clause 5.1.1

#### SYSTEM :

The ImagiFLEX<sup>®</sup> LM System involves the supply of a range of coloured bases, and a simplified let down procedure designed to produce finished UV Flexo inks which will minimise the likelihood of chemical migration, by using the revolutionary SCR (Self Curing Resin) - technology, thereby minimising the previous requirement to initiate the product with significant levels of photoinitiators, a known source of unwanted chemical migration.

#### FUNCTION :

The System functions in steps by weighing the base colour and adding, vehicle, PI (if necessary) stabilizer, surface slip, and rheology modifier to achieve the finished required ink profile.

#### RHEOLOGY :

The resultant finished ink will exhibit almost press ready rheology, depending on machine ink feed, anilox specification, and image layout etc., and can be adjusted at the discretion of the ink manufacturer.

#### CURING :

Similarly, this can be designed by the formulator to suit application and machine speed, but will not require the high levels of initiation normally experienced, and which can add to the ever –present danger of chemical migration by secondary contact to the packaged food.

The aim is to supply a range of UV curable coloured flexographic nano pigmented concentrates and a short range of carefully chosen intermediates to small ink manufacturers.

This will enable them to customise narrow web inks for their local or regional markets, via the capability to meet local conditions by modification of the key properties.

The background to this project is determined by the growing demand for small ink makers to quickly and efficiently manufacture and supply UV Flexo Low Migration ink ranges from base formulations.

This will avoid the need to formulate from expensive and complex primary ingredients, or to buy and re-sell expensive finished items from compliant overseas suppliers, and rely on external technical support.

Legislation covering migration of chemicals into pre-packed foodstuffs is becoming ever more strict, and controlled in Europe by various legislative bodies – currently the Ordinance of the Swiss FDA on articles and materials RS817.023.21 – often referred to as ‘The Swiss List’ – this Ordinance is under review currently, and MAY be replaced at some stage by the German Ordinance List – which some observers feel will be more stringent.

## ImagiFLEX<sup>®</sup> LM System - Product Information

Finished Ink Item	Pigment Type by CI	Concentrate Pigment Level	Concentrate Percentage in Ink	Finished Ink Pigment Level
Process Yellow	Y174	30	47	14
Process Magenta	R57.1	35	51	18
Process Cyan	B15.4	32	50	16
Process Black	K7	38	53	20
PMS Yellow	Y12	30	50	15
PMS Yellow	Y13	30	50	15
PMS Warm Red	R53.3	36	55	20
PMS Rubine Red	R57.1	36	53	19
PMS Rhodamine Red	R81, R57.1	36	44	16
PMS Purple	PV1, PR81	36	50	18
PMS Violet	PV3, PB15.3	30	50	15
PMS Reflex Blue	PB61	30	40	12
PMS Process Blue	B15.3	30	50	15
PMS Green	G7	36	50	18
PMS Black	K7	38	50	19
PMS 012 Yellow	Y74	30	50	15
PMS 021 Orange	O34	30	47	14
PMS 032 Red	R112	36	55	20
PMS 072 Blue	PB15.3,PV23	36	50	18
Transparent White	PW18	20	40	8
Opaque White	PW6	60	60	36
HiRES Red	R122	24	50	12
HiRES Violet	V23/PB15.3	30	46	14

# Imagico- UV Flexo Troubleshooting Guide

## Can we help?



<b>SYMPTOM</b>	<b>PROBABLE CAUSE</b>	<b>POSSIBLE REMEDY</b>
<b>Fine text and reverse image filling in</b>	Too coarse anilox Reverse out too fine Serif text too large Impression too high	Choose finer anilox to reduce coat weight Increase reverse out areas Reduce text size on plate Reduce impression between plate and substrate
<b>Dot gain</b>	Too much ink laydown Impression too high Backing Tape too hard	Choose lower cell volume anilox Reduce impression between plate and substrate Use softer backing tape
<b>Spitting</b>	Worn or slack doctor blade Plugged cells Ink fresh and cold	Renew or re-set doctor blade Clean out anilox to remove plugged ink Ensure ink is at ambient temperature and not too cold
<b>Hickies</b>	Too dry ambient Static build up Dusty atmosphere Dirt or dust on web	Increase humidity Reduce static Eliminate dust and debris from pressroom Engage web cleaner if available
<b>Strike-in</b>	Substrate too absorbent " " Ink too strong	Avoid absorbent substrates Prime or seal paper with suitable primer Reduce ink strength by adding trans white/varnish
<b>Poor curing</b>	Lamps out of date Dirt build up on lamp surface Dirty reflectors Too coarse anilox Press speed too high for image	Check lamps are within effective life Clean lamps Clean reflectors Too thick ink film - reduce anilox cell volume Reduce press speed
<b>Poor rub/scuff</b>	Poor adhesion Unreceptive surface Insufficient protection	Check pre-treatment level on filmics or top coated materials Prime substrate Overprint with high slip varnish or lacquer
<b>Pinholing</b>	Too low ink film Insufficient impression Reticulation	Increase anilox cell volume Increase impression Check pre-treatment level is adequate for material being printed

## COMPLIANCE DECLARATION

Imagico is fully aware of its responsibility to supply ink related products which meet the appropriate regulatory requirements for safety in food packaging, providing that the its products are used for the production of inks and coatings for decoration of the non-contact surface of the pack, or which could be, by their use, allowed to come into contact with the food via unintentional transfer, such as set-off, vapour phase transfer, substrate permeation, or other forms of permitted levels of migration.

We are pleased to declare that our **ImagiFLEX<sup>®</sup> LM Dispersions** are formulated and manufactured in accordance with the requirements of (EC) No. 1935/2004, (on materials and articles intended to come into contact with food) and that their use will assist the ink manufacturer to provide inks which conform to the requirements of (EC) No. 2023/2006 describing GMP (Good Manufacturing Practice for materials and articles intended to come into contact with food) – covering the design and production of food packaging.

Further, we certify that our products are formulated in accordance with the Guidelines described by the European Printing Ink Association, (EuPIA) and with respect to exclusion criteria defined in Clause 5.1.1 of these guidelines.

We also can state that our products are formulated in accordance with the regulations described in the Swiss FOPH Ordinance SR 817.023.21

We respect the requirements of certain multinational product specifiers who have very stringent norms and also may from time to time via their Guidance Notes on Packaging Inks request the non-use of certain components which are otherwise permitted under the Swiss ordinance List, or recommended and supported by toxicological data, and EFSA Specific Migration Limits – (SML's)

We respectfully inform our clients that as we are unable to control the operations within the entire packaging supply chain, we are compelled to remind all parties that the ultimate responsibility for food safety lies with the organisation which places the food item on the market.

*Disclaimer: Imagico Dispersions—when used in a correct and professional manner will assist the inkmaker to conform to the requirements of GMP 2025/2006, however, as printing ink is only one element of an industrial process involving several variables, this statement does not absolve the user of his responsibility to ensure the suitability of our product to his own process*

