

PARAGON INKS

GLOBAL INK SPECIALISTS | A MEMBER OF  ALDUS



UV FLEXO LUNA GAIA SYSTEM

Introduction

A first to market, the LUNA Gaia system is a unique solution, assisting printers, converters, brand owners and retailers to meet their goals for environmentally sustainable packaging developments.

The LUNA Gaia system consists of a full range of inks and complimenting coatings, specifically designed to be used on compostable packaging.

The LUNA Gaia system has been fully tested and certified to EN13432 for heavy metals and fluorine.

The LUNA Gaia inks, reflect the core LUNA range, exhibiting the same press and print performance, colour strength, fluidity, stability, quality.

Benzophenone, ITX, BDK and 369 free and developed for use on in-line UV flexo presses, giving optimum performance in all types of flexo printing units equipped with UV (MPM) drying.

This ink range has the potential for use on indirect food packaging, on the condition that Food Packaging Compliance (FPC) can be demonstrated.

Key Features	Advantages	Benefits
Tested and Certified to EN13432	Product decoration for compostable packaging	Environmentally sustainable packaging solutions
Certified heavier film weight usage	Minimal limitations on print design	Environmentally sustainable packaging solutions
High Colour Strength	Anilox and ink laydown flexibility	Cost savings and print optimisation
Based on the Pantone Digital Library	Colour accuracy and consistency	Cost savings and print optimisation
Low Viscosity & Fluidity	Improved print unit performance Optimised dot creation and clean print	Optimum up time and quality
Rapid & Balanced Cure Package Response	Optimum press speeds	Consistency and stability
Superior Adhesion	Performance from 0 to maximum speed	
Solvent Free	Use a wide range of materials	Flexibility in products you can convert
	Environmentally friendly	Healthy working environment
	Ink stability	Optimum up time on press
	No excessive lamp degradation	UV unit integrity
Surfactant Free	No foaming or aeration	Optimum up time on press and savings
	Overprintable	
Paragon Inks Global Guarantee	Product is always of the same high quality	Optimum up time on press and savings
Press Ready	No press side additions to the ink	Optimum up time on press
High Gloss	Aesthetic lacquer often not required	Potential for cost savings

Technical Information

4 Colour Process Set

Colour	Code	Maximum Lay Down (EN 13432)	Light Fastness	Weather Fastness (100hrs)	Alkali	Acid	Soap	Alcohol
Yellow	YFG001	16%	4-5	N/A	5	5	N/A	5
Rubine	RFG001	16%	4-5	N/A	4	2	2-3	3
Cyan	CFG001	7.6%	7-8	N/A	N/A	N/A	N/A	5
Process Black	BFG005	7.6%	6	N/A	4	2	2-3	3

Base Ink Palette

Colour	Code	Maximum Lay Down (EN 13432)	Light Fastness	Weather Fastness (100hrs)	Alkali	Acid	Soap	Alcohol
Yellow	YFG001	16%	4-5	N/A	5	5	N/A	5
Orange	YFG002	16%	4-5	N/A	4	4	N/A	N/A
021 Orange	YFG004	16%	4-5	N/A	3	4	N/A	N/A
Warm Red	RFG002	16%	4-5	N/A	3	4	N/A	N/A
032 Red	RFG004	16%	4-5	N/A	3	5	N/A	3
Rubine	RFG001	16%	4-5	N/A	4	2	2-3	3
Rhodamine	RFG003	15%	6-7	N/A	5	5	5	5
Purple	CFG003	15%	6-7	N/A	5	5	5	5
Violet	VFG001	15%	6-7+	5	5	5	5	5
072 Blue	CFG004	7.6%	4-5	N/A	4	2	2-3	3
Reflex Blue	CFG002	7.6%	4-5	N/A	4	2	2-3	3
Cyan	CFG001	7.6%	7-8	N/A	N/A	N/A	N/A	5
Green	GFG001	7.6%	4-5	N/A	5	5	N/A	5
Untoned Black	BFG002	7.6%	6+	N/A	4	2	2-3	3
Tint Medium	TFG001	17%	N/A	N/A	N/A	N/A	N/A	N/A

Opaque White Inks

Description	Code	Maximum Lay Down (EN 13432)	Recommended Anilox Volume	Recommendations for Use
First Down White	WG3348	22%	10-30 cm ³ /m ²	First down print applications on supported stocks
Flexible First Down White	WG3347	16%	8-10 cm ³ /m ²	First down print applications on unsupported stocks and where flexibility is needed

Coatings

Description	Code	Maximum Lay Down (EN 13432)	Recommended Anilox Volume	Recommendations for Use
Gloss Lacquer (O/P)	LG5508	15%	6.0 – 8.0 cm ³ /m ²	Primer and/or over printable coating
High Gloss Lacquer	LG5512	17%	6.0 – 8.0 cm ³ /m ²	General purpose coating
Matt Lacquer (O/P)	LG5519	17%	6.0 – 8.0 cm ³ /m ²	Over printable coating
Dead Matt Lacquer	LG1117	22%	6.0 – 8.0 cm ³ /m ²	Over printable coating

Physical Data

Curing speed	> 100 m/min		
Curing type	Ultraviolet (free radical)		
Typical densities (Optimised process weights at 150 m/min)	Yellow 0.95 - 1.15	Magenta 1.35 - 1.45	
	Cyan 1.35 - 1.45	Black 1.40+	
Volume recommendations (cm ³ /m ²)	Process work	2-4 cm ³ /m ²	
	Line or Type	4-6 cm ³ /m ²	
	Solids	5-7 cm ³ /m ²	
Suitability/performance:	Excellent	Good	Testing advised
Substrates:			
Machine coated paper	•		
Top coated synthetic substrates	•		
Thermal active papers (when over lacquered)**		•	•
Foils	•		
Suitable overprint methods:			
Thermal transfer overprinting	•		•
Hot Foil	•		•
Laser overprinting	•		•
Suitable overprint methods:			

Notes on Compostability

The amount of ink or coating that can be used is calculated on the following factors:

- The total weight of the packaging
- The “maximum Lay Down” (Limit Concentration Percentage)

Example:

If the total packaging weighs 100 grams, then the usage of YFG001 would be a maximum of 16g.

Coverage can be calculated by GSM, if the total packaging surface area is known and volume delivery of each ink and coating.

Please Note:

Complete compliance to EN13432 and the ability to carry the composable logo, has to be demonstrated by the full testing of the final packaging.

Notes on Fastness Table

All figures are based on the latest available information at the time of publication. Please note for inks containing more than one pigment the lowest fastness values are quoted.

For further information on light fastness see our Knowledge Base article on “The Lightfastness of Printing Ink”.

The above lightfastness figures are based on a 1-8 Blue Wool Scale for dry lightfast conditions only.

Weather fastness results are quoted for 100 hours’ exposure (approximately 1 month) on the following grey scale for weather fastness where 1* = colour disappeared. For outdoor applications that may be exposed to weathering please contact Paragon for recommendations prior to printing.

Grey Scale	5	4-5	4	3-4	3	2	1
Fastness	Very Good	Good	Adequate	Fair	Poor	Very Poor	Not Acceptable

Substrates

This ink system has been purposely designed for use on approved compostable materials both supported and unsupported. The inks are press ready and the use of performance additives is not recommended without prior consultation or recommendation by Paragon Inks.

NB. Due to the wide variety of synthetic substrates available we cannot provide guarantees for ink adhesion. We recommend the use of good quality top coated substrates. Non - top coated substrates can also be converted providing the material is corona treated or primed prior to printing.

It is recommended that adequate testing be carried out prior to production runs.

Overprinting

All inks detailed in this information sheet are free from surfactants and are considered suitable for overprinting using thermal transfer ribbons, hot foils, laser toners, flexo and screen inks. Please note that due to the wide variety of ribbons, foils and toners which are available, we always recommend overprintability trials be conducted for suitability when using these products for the first time or if the print construction changes.

It is important that tests are carried out to ensure good results can be achieved when printing on press.

Other Information

All products must be mixed/stirred thoroughly to ensure consistency prior to printing, failure to do so may alter the performance or finish of the ink.

Storage and Shelf Life

All products detailed in this information sheet have a guaranteed shelf life of 12 months, but storage conditions are imperative. The container should be closed immediately after use and stored in a dry area at 5-18°C away from direct sunlight. This guarantee only applies to sealed, unopened containers.

The information contained in this General Information sheet is based on the experience of Paragon Inks (Holdings) Limited and our internal laboratory test procedures. It is not to be interpreted as a warranty or guarantee in any form as conditions and variables beyond our control can affect the end result. We recommend press trials when using new substrates and other print related variables for suitability purposes. We reserve the right to alter any product data as a result of technical or manufacturing processes.

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