

# Printing inks for **labels**



**1857**  
160 YEARS  
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# Low-migration



In addition to meet aesthetic and commercial requirements, packaging for food, cosmetics and pharmaceutical products also has the special task to protect products against external influences. Minimising the transition of components from the packaging material to the products is crucially important in this regard. As a specialist supplier, RUCO recognised this importance early on and therefore developed low-migration (LM) printing inks to cater for the needs of the packaging industry. The formulation of these low-migration inks is such that, provided they are used correctly, they comply with the migration threshold values for the substances in question.

## What exactly do the terms “migration” and “low-migration” mean?

Migration is the movement of material components from the packaging material to the product contained therein. A distinction is made between two types of migration:

- Penetration: The constituent migrates from the outer surface of the packaging through the packaging into the product.
- Set-off: The printing ink sets off to the food-contact surface when in the stack or on the reel.

“Low-migration” means that only those raw materials are used that have a minimal level of migration or do not migrate at all under normal processing, storage and conditions of use. This is particularly important for food packaging decoration.

## What to take into consideration?

### Personnel

- Train your employees to ensure their acceptance and awareness of the required care and attention

### Consumables

- Use suitable materials exclusively (washing agents, printing inks / varnishes, substrates with barrier function, adhesives, wetting agents and other printing auxiliaries)

### Machine / Production

- The cleanliness of machines and premises must take top priority; for example with regard to print rollers, blankets, printing plates, UV lamps and reflectors, exhaust facilities etc.

### Documentation

- Implement a system according to 1935/2004 Art. 17 to ensure traceability

## Practical recommendations:

- Use low-migration products for all printing jobs carried out for the food, cosmetics and pharmaceutical industries
- Wherever possible, use substrates with barrier effects
- Use low-migration consumables exclusively
- Use low-migration varnishes and adhesives exclusively, as well as suitable printing auxiliaries
- Avoid the risk of “contamination” by ensuring thorough cleaning of print rollers and blankets
- Use individual printing presses for low-migration printing exclusively
- Check UV emitters and reflectors at regular intervals

UV screen printing inks low-migration,  
silicone-free

# 905UV-LM



## Your benefits

- Low-migration comply with the "Nestlé Guidance Note on Packaging Inks" - version 08-2016
- In accordance with positive list 1A of the EuPIA Suitability List of Photoinitiators as well as the specifications of the Swiss EDI Ordinance on Consumer Goods (SR 817.023.21) for inks applied to the non-food contact surface of food packaging
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Very reactive even at high machine speeds of up to 60 m/min
- Low viscosity, for universal use on a wide range of substrates
- Very good flow characteristics
- High opacity and colour brilliance by optimal pigment wetting and ideal basic colour shades composition
- Good solvent and water resistance  
Excellent filling resistance after 48 hours
- The inks series is suited especially for combination printing with UV flexo printing inks

## Product range

- 10 basic colour shades and transparent white
- Highly opaque white
- Overprinting varnishes for UV screen printing in low migration



UV screen printing opaque white,  
low-migration, silicone-free

# 905UV1484LM



## Your benefits

- Low migration, comply with the "Nestlé Guidance Note on Packaging Inks" - version 08-2016
- In accordance with positive list 1A of the EuPIA Suitability List of Photoinitiators as well as the specifications of the Swiss EDI Ordinance on Consumer Goods (SR 817.023.21) for inks applied to the non-food contact surface of food packaging
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Free from CMR materials
- Silicone-free, barium-free, low-odour, highly opaque, low viscosity, suitable for stamping
- Very good flow characteristics
- Very well suited for overprinting with UV flexo, offset letterpress and **UV inkjet inks**
- Good solvent and water resistance  
Excellent filling resistance after 48 hours
- Pre-treated PE and PP, top-coated PE, top-coated PP, top-coated polyester, PVC and other types of plastic, paper and cardboard



UV screen printing inks low-migration

# 965UV/MA



## Your benefits

- Low-migration, barium-free, **does not** comply with the „Nestlé Guidance Note on Packaging Inks“
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Very reactive even at high machine speeds of up to 60 m/min
- Low viscosity, for universal use on a wide range of substrates
- High opacity and colour brilliance by optimal pigment wetting and ideal basic colour shades composition
- Good solvent and water resistance
- Very good print quality in line, half-tone and full-tone printing at high machine speeds
- Compatible with UV inks for other printing processes
- Stamping and die-cutting possible without any problems
- For all standard rotary screen printing machines and screen meshes

## Product range

- 10 basic colour shades and transparent white
- Process colours for 4-colour set
- Highly opaque formulation in white (silicone-free) for use in UV flexo and screen printing
- Highly opaque black



UV screen printing opaque white,  
low-migration, silicone-free

# 965UV1425MA



## Your benefits

- Low-migration, barium-free, **does not** comply with the „Nestlé Guidance Note on Packaging Inks“
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, low viscosity, highly opaque, suitable for stamping
- Very good flow characteristics
- Very well suited for overprinting with UV flexo, offset and letterpress inks
- Good solvent and water resistance after 12 hours
- Pre-treated PE and PP, top-coated PE, top-coated PP, top-coated polyester, PVC and other types of plastic, paper and cardboard



UV flexo printing inks low-migration,  
silicone-free

# UVFX-LM



## Your benefits

- Low migration, comply with the "Nestlé Guidance Note on Packaging Inks" - version 08-2016
- In accordance with positive list 1A of the EuPIA Suitability List of Photoinitiators as well as the specifications of the Swiss EDI Ordinance on Consumer Goods (SR 817.023.21) for inks applied to the non-food contact surface of food packaging
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Excellent printability at high speeds thanks to low viscosity
- High opacity and colour brilliance by optimal pigment wetting and ideal basic colour shades composition
- Excellent in line, half-tone and full-tone printing
- Very good chemical resistance
- Optimal results in combination with other printing methods, also in stamping and die-cutting
- For use on all standard UV flexo printing machines

## Product range

- 12 basic colour shades and transparent white
- Process colours for 4-colour set
- Highly opaque white



UV flexo printing opaque white,  
low-migration, silicone-free



# UVFX-1059LM

## Your benefits

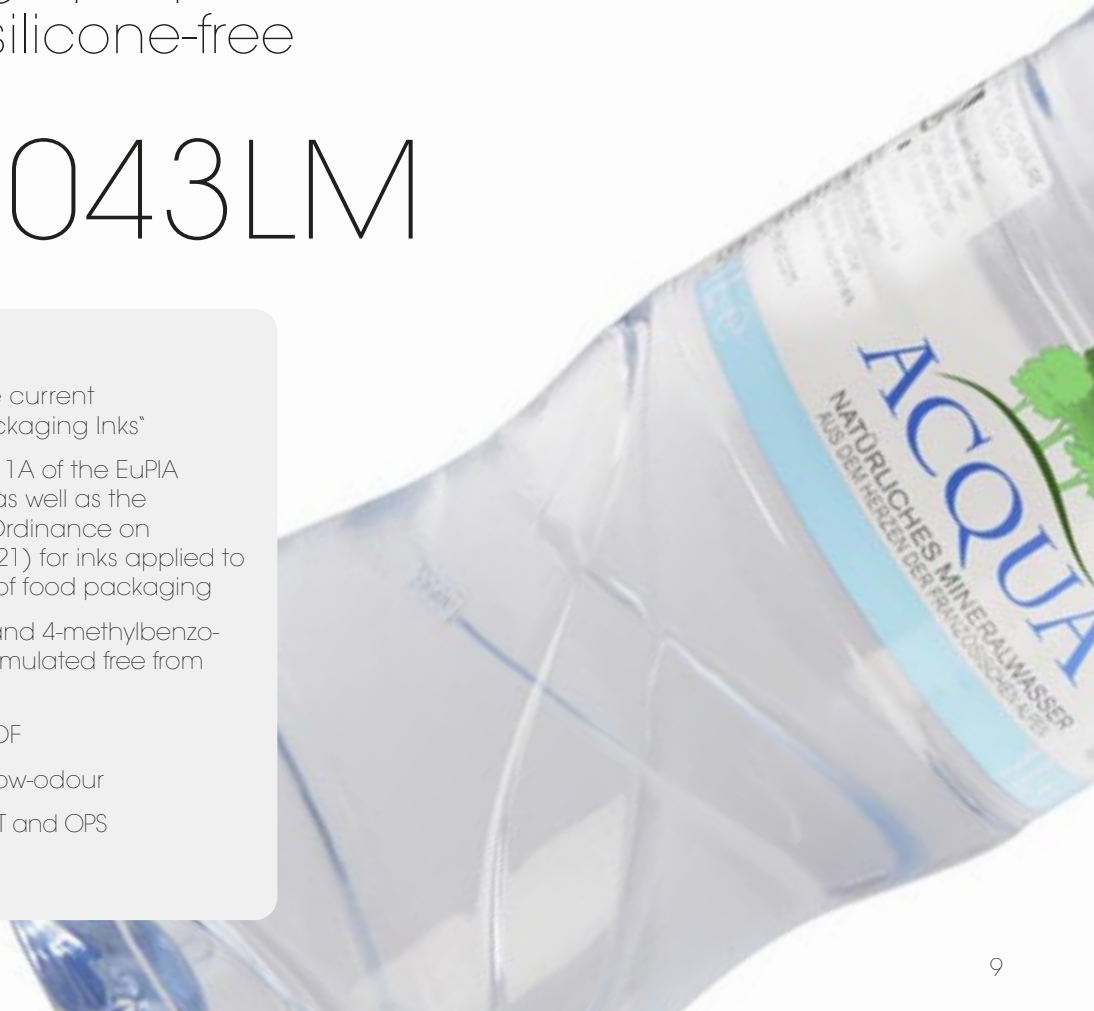
- Low-migration comply with the current "Nestlé Guidance Note on Packaging Inks"
- In accordance with positive list 1A of the EuPIA Suitability List of Photoinitiators as well as the specifications of the Swiss EDI Ordinance on Consumer Goods (SR 817.023.21) for inks applied to the non-food contact surface of food packaging
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Excellent printing properties
- Corona pre-treated PE and PP, top-coated PP and PE, pre-treated PET, PVC

UV flexo printing opaque white for sleeves,  
low-migration, silicone-free

# UVFX-1043LM

## Your benefits

- Low-migration comply with the current "Nestlé Guidance Note on Packaging Inks"
- In accordance with positive list 1A of the EuPIA Suitability List of Photoinitiators as well as the specifications of the Swiss EDI Ordinance on Consumer Goods (SR 817.023.21) for inks applied to the non-food contact surface of food packaging
- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Opaque white with very low COF
- Silicone-free, barium-free and low-odour
- Good tape resistance on OPP, PET and OPS
- Excellent scratch resistance



# Standard ink system



The standard ink system for label printing on combination printing machines is based on the UV flexo and screen printing inks for flat bed as well as for rotary screen printing.

Printing varnishes for different application techniques ideally round off the system and enable high resistances and eye-catching advertising effects to be achieved.

Optimum crosslinking characteristics ensure the inter-compatibility of these different label printing ink series.

Very good overprinting and printing characteristics with various printing techniques guarantee excellent inline production.

High process stability and very low-odour are further advantages of the standard ink system.



UV screen printing inks silicone-free

# 963UV-SF



## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Very reactive even at high machine speeds of up to 60 m/min
- Low viscosity, for universal use on a wide range of substrates
- Very good flow characteristics
- High opacity and colour brilliance by optimal pigment wetting and ideal basic colour shades composition
- Good solvent and water resistance  
Excellent filling resistance after 48 hours
- The inks series is suited especially for combination printing with UV flexo printing inks

## Product range

- 10 basic colour shades and transparent white
- Highly opaque white
- Overprinting varnishes



UV opaque white for combination printing,  
silicone-free



# 900UV1452<sub>and</sub> 900UV1452XL

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Opaque white for combination printing – UV screen printing and UV flexo printing
- Silicone-free
- Highly opaque, reactive (**900UV1452XL very reactive**)
- Low viscosity for speeds of up to 100 m/min
- Excellent printability
- For universal use due to good adhesion to a wide range of substrates
- Very well suited for overprinting with UV flexo, offset, letterpress and **UV inkjet inks**
- Overembossing and overprinting of stamping foils possible



# UV screen printing inks

## 985UV and 985UV/NV



### Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Universal use, both for flat screen printing and rotary screen printing (**low-viscosity formulation - 985UV/NV**)
- Excellent flow characteristics
- Very reactive ink with high opacity
- Very good curing and adhesion even at high machine speeds
- Very good solvent and water resistance after 12 hours
- Can be used on a wide range of substrates

### Product range

- 11 basic colour shades and transparent white
- Process colours for 4-colour set
- Lightfast formulation
- Highly opaque white and black
- Metallic effect inks
- Overprinting varnish for UV screen printing



UV flexo printing inks silicone-free



# UVFX

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Excellent printability at high speeds thanks to low viscosity
- High opacity and colour brilliance by optimal pigment wetting and ideal basic colour shades composition
- Excellent in line, half-tone and full-tone printing
- Very good chemical resistance
- Optimal results in combination with other printing methods
- For use on all standard UV flexo printing machines

## Product range

- 13 basic colour shades and transparent white
- Process colours for 4-colour set
- Highly opaque white and black (very reactive)



UV flexo printing opaque white,  
silicone-free

# UVFX-1044



## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Silicone-free, barium-free and low-odour
- Low viscosity, suitable for high printing speeds
- Excellent printing properties at high machine speeds
- Pre-treated PE, PP, OPP, PET, PVC, BOPP

UV flexo printing opaque white for sleeves,  
silicone-free

# UVFX-1045

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Opaque white with low COF
- Silicone-free, barium-free and low-odour
- Suitable for high machine speeds
- Excellent scratch resistance
- Good tape resistance on OPP, PET and OPS



UV screen printing effect ink  
brilliant silver

# 900UV4374

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP)
- High gloss, very reactive and low viscosity
- Excellent brilliance by leaving pigments
- Suitable for direct printing on PVC, pre-treated Polyethylene (PE) and Polypropylene (PP) as well as paper and carton



UV screen printing effect inks and  
UV screen printing effect varnish



# 985UV

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Excellent flow characteristics
- Very reactive ink with high opacity
- Very good curing and adhesion even at high machine speeds
- Pre-treated PE, PP, OPP, PET, PVC, BOPP and paper

## Product range

- Fluorescent inks (yellow, orange, magenta, cyan)

# 960UV451

## Your benefits

- Free from ITX, benzophenone and 4-methylbenzophenone (4-MBP) as well as formulated free from Bisphenol A
- Low-tactile varnish, gloss and silicone-free
- Pre-treated PE, PP, PET, paper and carton



# UV VARNISHES

	Low-migration varnishes				
Technical information	UV overprinting varnishes			UV tactile varnishes	
960UV	480LM	481LM	488LM	494LM	503LM
Application	high gloss	matt	satin matt	gloss low tactile	gloss low tactile
pre-treated plastic films - PE, PP, PET	●	●	●	●	
printed plastic films	●	●	●	●	
paper, carton	●	●	●		●
printed paper, printed carton	●	●	●		●
Printing process					
flad bed screen printing					
rotary screen printing				●	●
flexo printing	●	●	●		
offset varnish unit	●	●	●		
roller coater / chamber blade	●				
inline	●	●		●	●
approx. speed of machine (m/min)	80	25	35	50	50
OPV properties					
ITX-, benzophenone-, 4-Methylbenzophenon-free	●	●	●	●	●
free from Bisphenol A	●	●	●	●	●
low-migration	●	●	●	●	●
Nestlé Guidance Note on Packaging Inks 08-2016	●			●	●
silicone-free	●	●	●		
reactive	●	●	●	●	●
no penetration in the substrate (paper/carton)					●
high-gloss / high-speed	●				
gloss					
matt		●			
satin matt			●		
tactile 50 - 100 µm				●	●
braille 150 - 250 µm					
Properties, cured OPV					
high-slip					
gluing	●		* limited suitability	●	
hotfoil stamping/ foil blocking	●		* limited suitability	●	
thermotransfer printable					
inkjet printable					
high degree of finishing				●	●
high scuff resistance				●	●
high chemical resistance	●	●	●	●	●
high water resistance					
immediate further processing	●	●	●	●	●

**Note:** RUCO UV varnishes are not suitable for direct food contact



## Standard varnishes

UV overprinting varnishes					UV tactile varnishes					
161	362	407	417	435	290	298	393	438	451	487
high gloss	gloss	gloss	matt	matt	high tactile	high tactile	high tactile	low tactile	low tactile	low tactile
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\* limited suitability



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