



We create chemistry

Water-Based Inks for Flexible Packaging

A Sustainable and Healthy Solution for the Future

Tjalle Hijlkema | March 2021

AGENDA



Tjalle Hijlkema, BASF

General and market introduction to water-based inks for flexible packaging



Marcin Spiewok, SILBO

Innovative approach and the highest quality is always combined with care for nature



Laura Pomes, Quimovil

Water-based inks: the sustainable solution for the future



Jordi Puig, COMEXI

We are entering a new era of sustainability and there is no turning back



All

CONTACT DETAILS



Tjalle Hijlkema

Commercial Marketing Flexible Packaging
BASF Nederland BV
tjalle.hijlkema@basf.com
+31 6 18752061



Marcin Spiewok

CEO and Business Development Executive
Silbo Sp. Z.o.o.
mspiewok@silbo.pl
+48 607 606606



Laura Pomes

Technical Manager
Quimovil – Graphics Industry Inks
lpr@quimovil.com
+34 937 291 944



Jordi Puig

Brand Manager & Business Developer BU Flexo
Comexi Group
jordi.puig@comexi.com
+ 34 659 067737

AGENDA - INTRODUCTION

- European ink market for flexible packaging
- Pros and cons of water-based inks
- Why consider the conversion?
- #WePrethinkINK



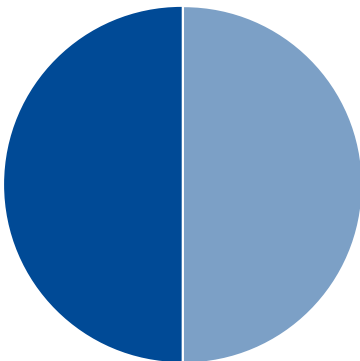
European Ink Market for Printing & Packaging – A Mental Map

European Ink Market

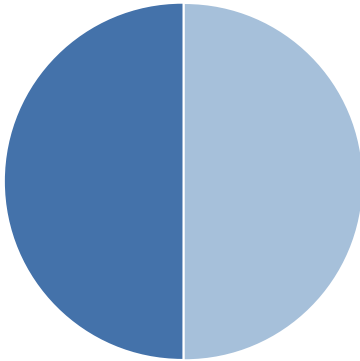
Liquid Ink

Flexible Packaging

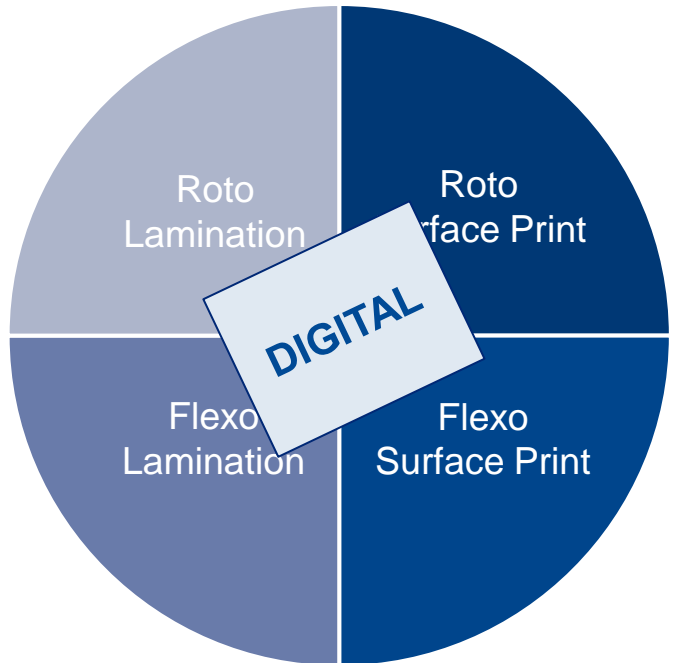
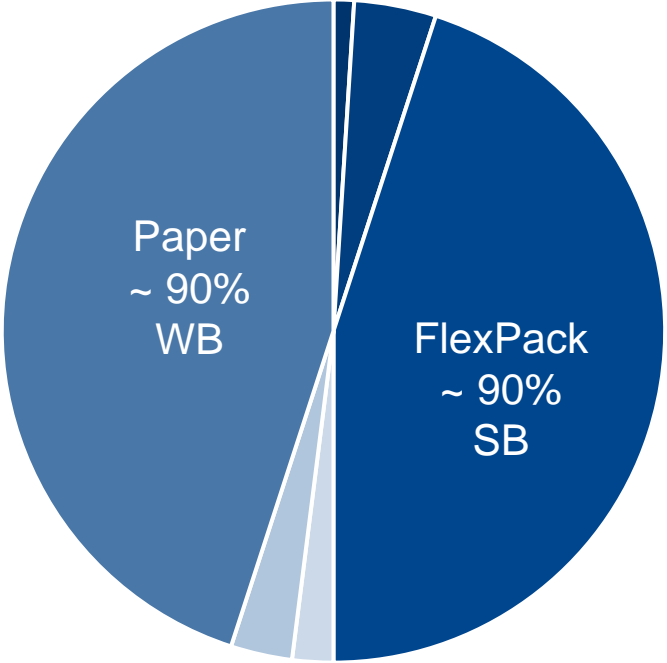
Print Techniques



- Offset Ink
- Liquid ink

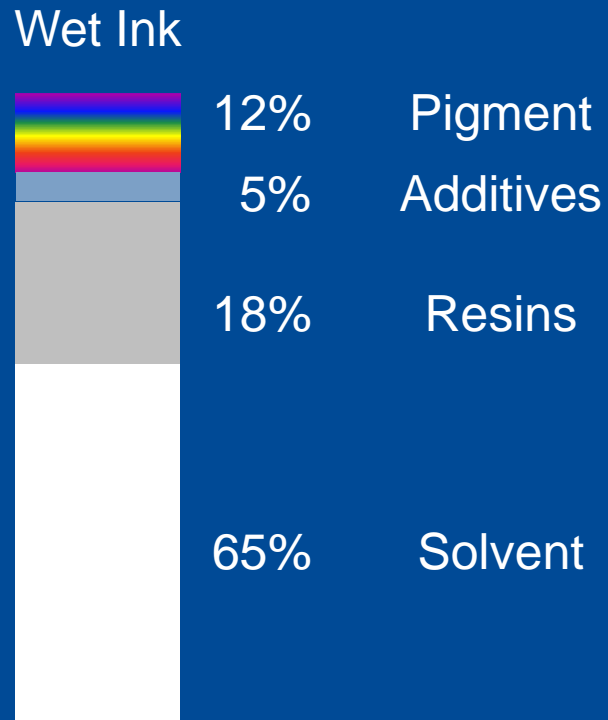


- Flexible Packaging
- Paper and Board



Quite Some Solvents Currently Used in Inks for Flexible Packaging

INK COMPOSITION



How Much Solvent Is Being Used in the Flexible Packaging Industry in the EU ?

250,000 MT (250 kT) Ink in Europe (ca 150 kT solvent) per Liter Ink, 1 Liter Solvent

$150,000 + 250,000 = 400,000 \text{ MT Solvent}$

400,000,000 Liters

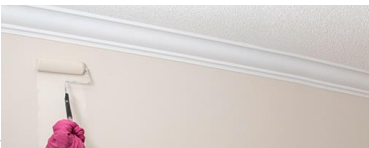
approx. **20,000 Road Tankers!**



x 1,000

Many Applications Already Made the Move from Solvent to Water-Based

- **Paper and board already mainly printed with WB inks**
 - Board pre- and /or post-print
 - Liquid food packaging
- **Decorative coatings**
 - Water-based coatings are preferred for many years already
- **Automotive coatings**
 - Water-based primer, base- and top-coats a car brands
- **Flexible packaging with water-based inks**
 - *Conversion is ongoing*



Pros and Cons Between Water-Based and Solvent-Based Inks

WATER-BASED INKS

PRODUCTION

- Printing & Drying Speed
- Resolubility & Cleanability
- Color Strength
- Visco Stability
- Foaming
- Fine-Line / Half-Tone Printing
- Substrate Wetting

MANAGEMENT

- Health & Safety
- Smell & Solvent Retention
- VOC Management – Incineration
- Fire/Explosion Risk – Insurances
- CO₂ Footprint

- Increase Air Flow
“Housekeeping”
- Defoaming Additive
- Corona Treatment

SOLVENT-BASED INKS

PRODUCTION

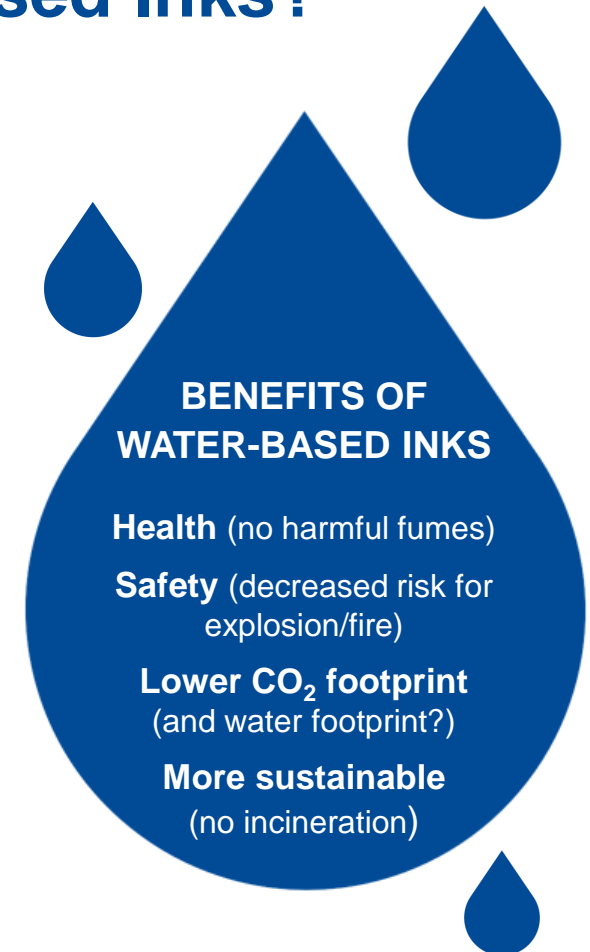
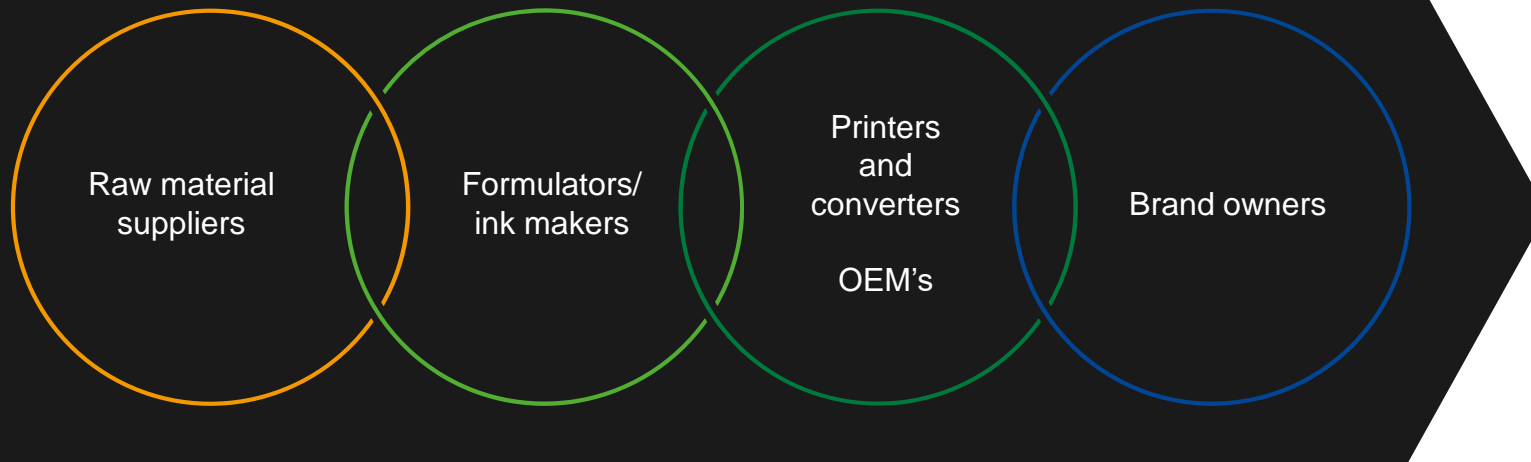
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Why Should You Consider the Conversion to Water-Based Inks?

- Brand owners are asking for more **sustainable solutions**
- **Increase** the **health** and **safety** during the printing process
- All actors in the value chain have **increased** the **performance** of their respective products – it is indeed possible now!



PRETHINK INK

Network of Companies Promoting the Use of Water-Based Inks

We
prethink
ink.

Raw Material Suppliers

BASF
We create chemistry



Ink Makers

Quimovil
GRAPHICS INDUSTRY INKS



FOLMANN



DF
GROUP



Machine Producers / Machine Equipment

COMEXI



SAUERESSIG



U-GROUP
TECO



Printers

SILBU



GRUPO CONSIST
flexible solutions for flexible packaging



Packaging Companies

NNZ
the packaging network



CADEL
DEINKING



Recycling / De-Inking



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