

The World of ACTEGA

Aqueous Inkjet for Flexible Packaging and Labels
Lehrte, 2021 November 30th, André Salié

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ACTEGA – a Short Introduction



The Corporate Structure of ALTANA

Four divisions, one successful group



Sales	€2,178 m	EBITDA	€426 m
Employees	6,529	EBITDA margin	19.6 %



Paint additives
Plastics additives
Industrial applications
Exploration
Measuring and testing instruments

Sales in €m: 1,009
Employees: 2,307

Coatings
Graphic arts
Cosmetics and personal care
Plastics industry
Functional applications

Sales in €m: 315
Employees: 1,694

Wire enamels
Electrical
Electronic
Engineering materials

Sales in €m: 463
Employees: 1,071

Flexible Packaging
Metal Packaging Solutions
Paper & Board

Sales in €m: 391
Employees: 1,238



All figures relate to the fiscal year 2020.

ACTEGA - 3 Business Lines Serving Your Markets

For various applications with dedicated products

Business Lines	Flexible Packaging 	Metal Packaging Solutions 	Paper & Board 
Products	Coatings · Inks · Adhesives	Compounds · Sealants · Coatings · Inks	Coatings · Inks · Adhesives · Auxiliaries
Markets/ Applications	<p>Flexible Paper & Plastics Sachets, Pouches, Bags, Plastic Tubes, Secondary Packaging</p> <p>Alu Foil Portion Packs for Beverages, Human- and Pet Food- Containers, Lids, Wrappers, Innerliners, Blisters</p> <p>Labels Pressure Sensitive, Shrink Sleeves, Wet Glue, Wrap Arounds, In-mold</p>	<p>Closures Crown Corks, Alu Closures, Alu Long Caps, Metal Vacuum Closures, Plastic Closures</p> <p>Cans General Line, 2-Pieces Cans, 3-Pieces Cans, 3-Pieces Aerosols, Ends</p> <p>Monobloc & Tubes Monoblocs, Metal Tubes, Alu Bottles, Other Specialties</p>	<p>Paper-based Packaging Folded Cartons, Corrugated, Blister</p> <p>Publication & Commercial Publications, Commercials, Playing Cards, Photo Products</p> <p>Tobacco Tobacco Packaging</p>

We Shape Future Markets

Investments in R&D and new technologies

Digital Varnishing

With the diVar® technology, individual effects can be achieved without resetting time through different coating heights, matt and gloss effects in one pass as well as film application.



EcoLeaf

Shortly before the market launch of a pioneering technology that achieves metallic effects on products with considerably less material, costs and production time than before.



ACTEGA Digital Group

Establishment of dedicated competence and technology centers in Germany and the US. Bundles all R&D activities; provides inks, primers and coatings required for the use of digital printing technologies.

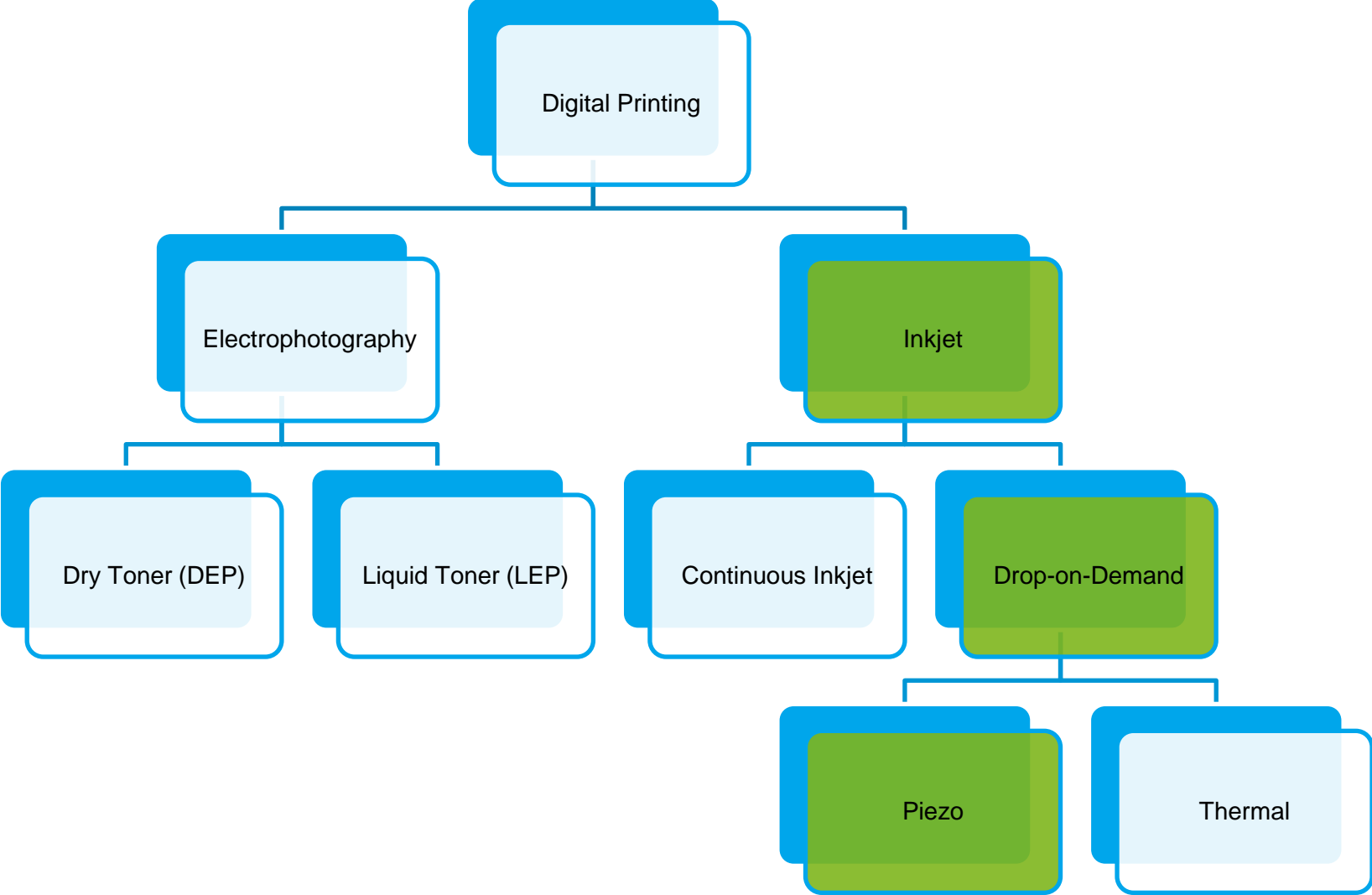


Signite™

This new technology significantly reduces the amount of converting waste generated and gives consumer product containers a unique high-value no-label esthetic.

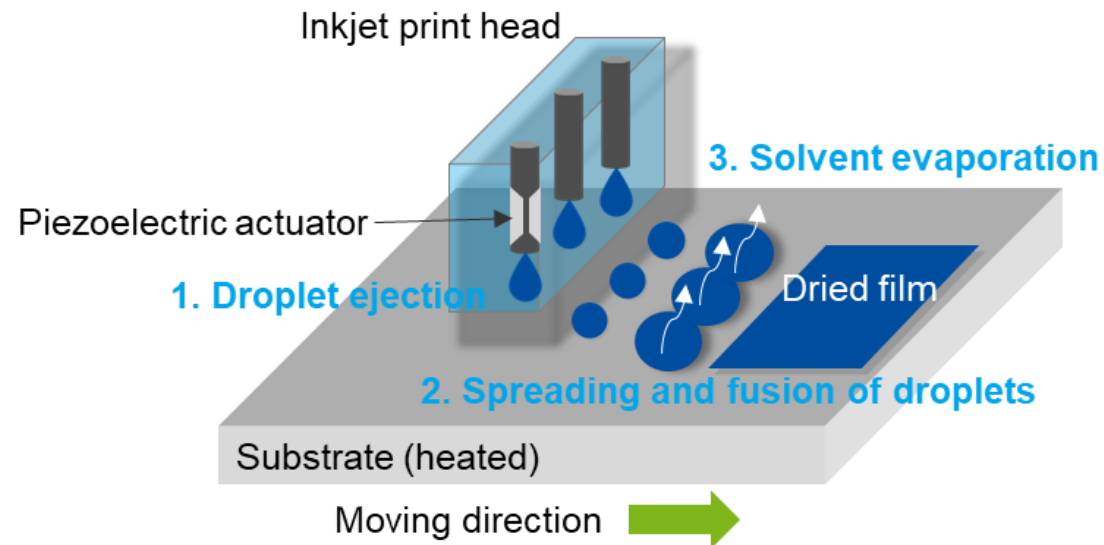


Digital Printing Landscape



Aqueous Inkjet in Film Printing

Demanding Packaging Applications & unique Product Properties



Industrial Digital Printing

Drop-on-Demand Technology

Water-based Systems

Indirect Food Contact

Integrated Systems: Primer & Ink & OPV

„Challenging“, Non-absorbant Substrates

Challenges and Advantages in Waterbased Inkjet Printing

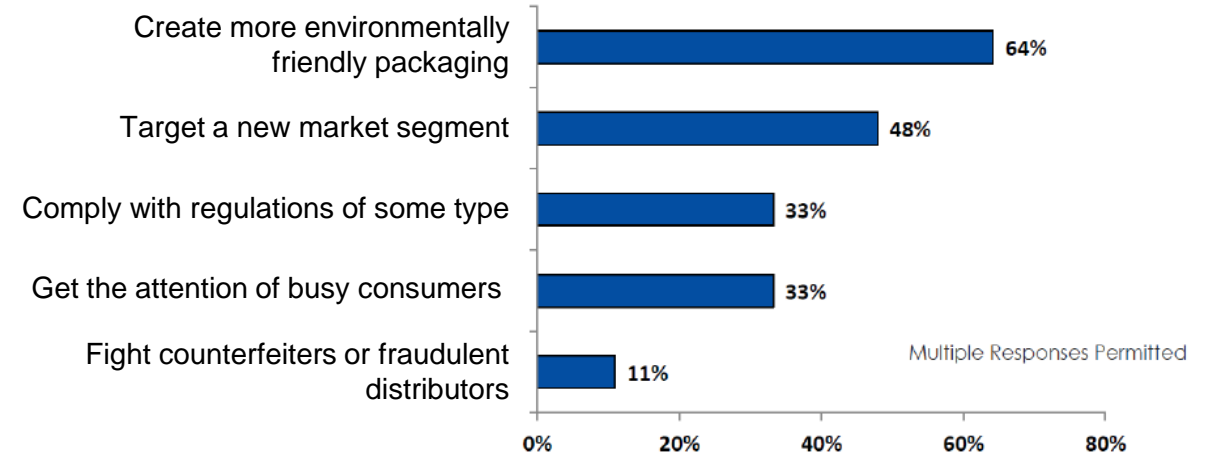


Regulatory + Sustainability Driver for Waterbased Chemistry

Survey:

„Which of the following needs are the most likely to cause your company to make new or different designs for packaging or labels?“

(source: KEYPOINT Intelligence, October 2019)



Cradle2cradle or made from recycled materials



Migration limits and indirect food contact



Reviews of substance classification



Aqueous Inkjet to Print on Film Requirements



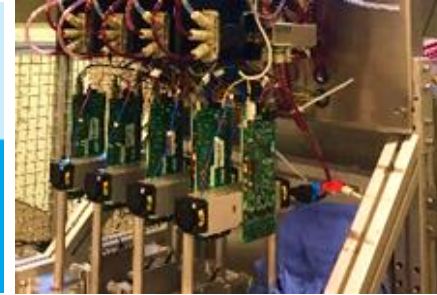
Non-absorbant Substrates



Pinning and final Drying



Adjustment and Interaction of Primer, Ink and Overprint Varnish

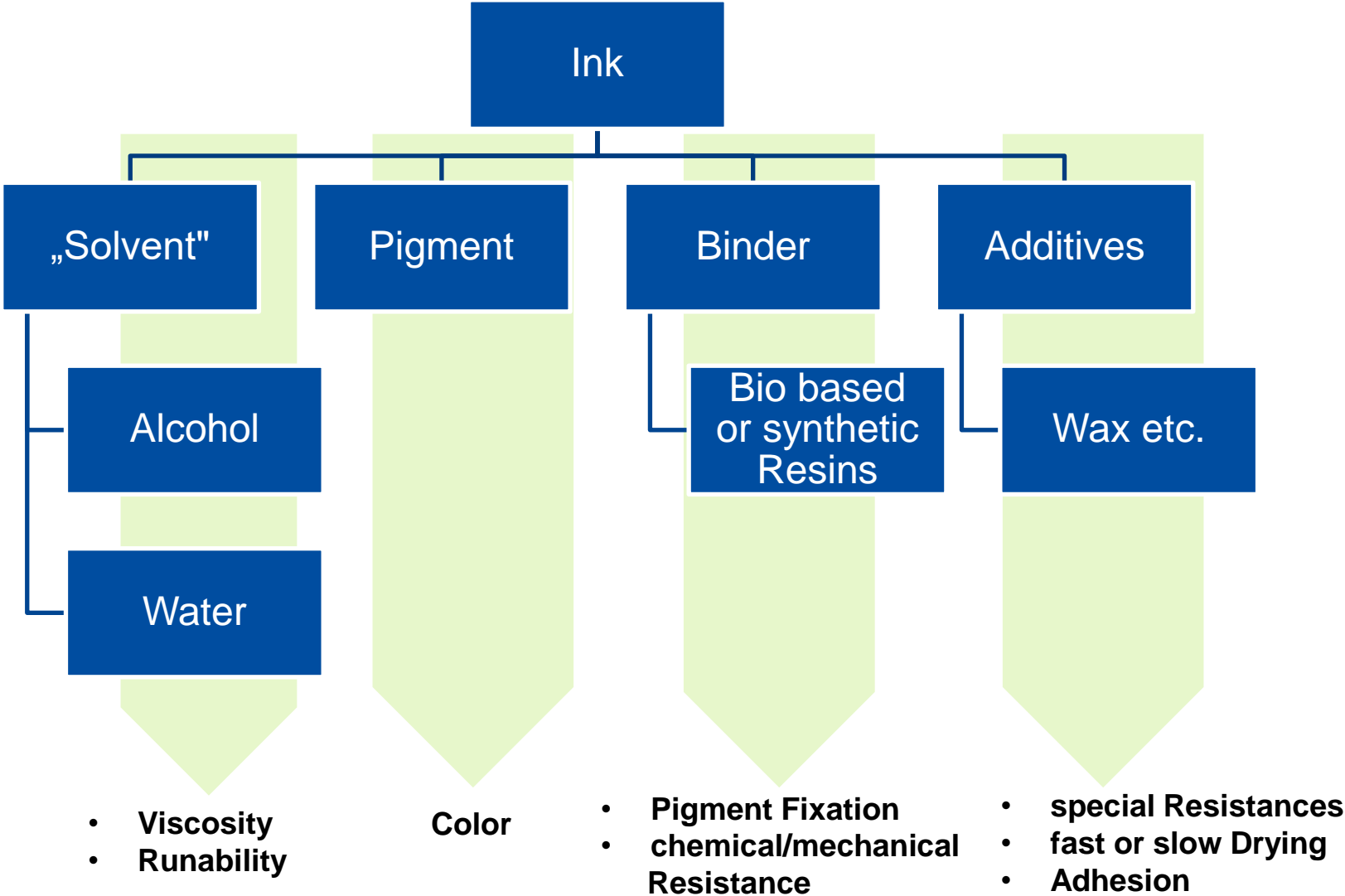


Nozzle Open Time and Head Maintenance

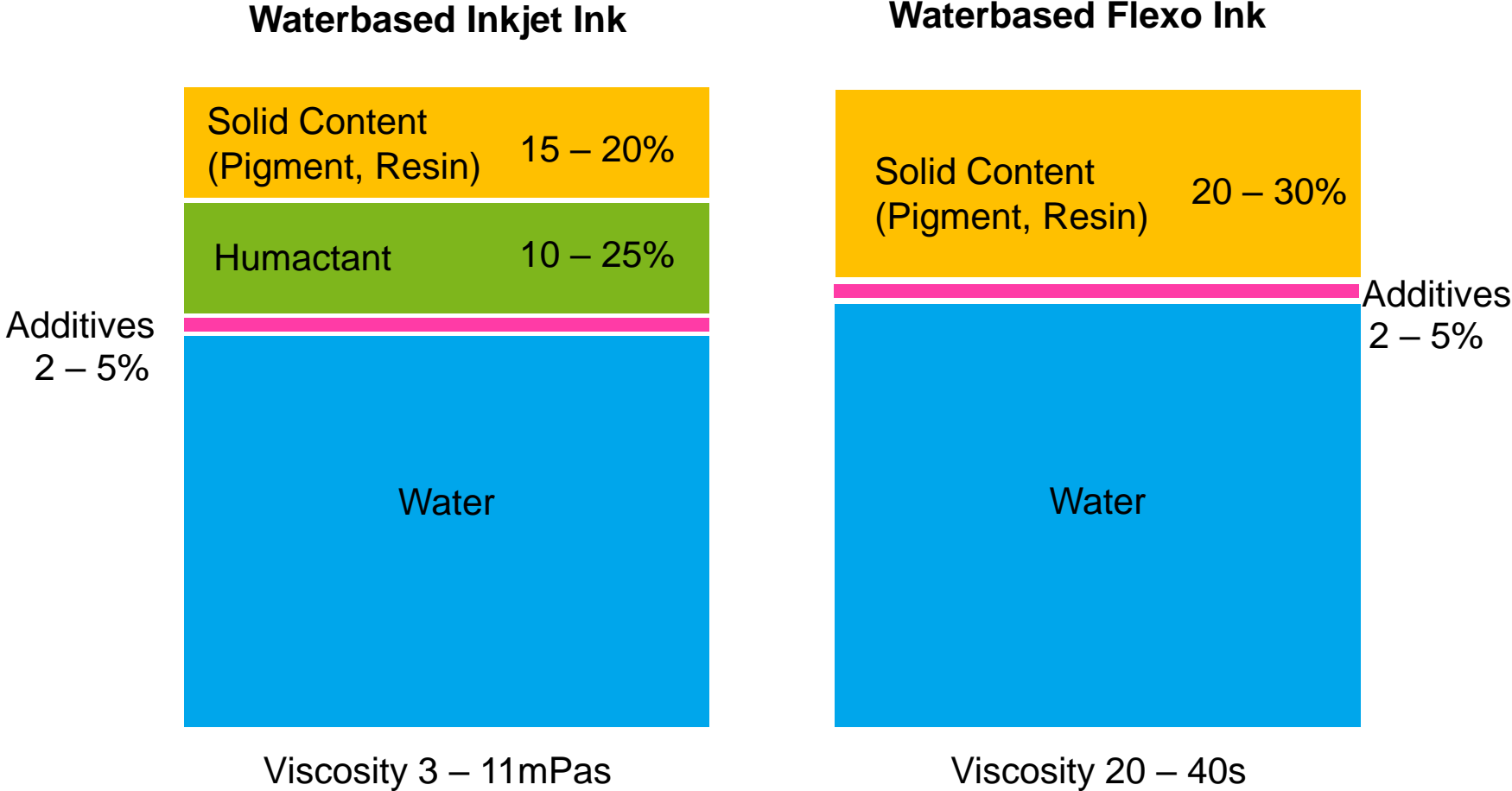


Dot by Dot without Intercolor Bleeding

Ink Components and Function



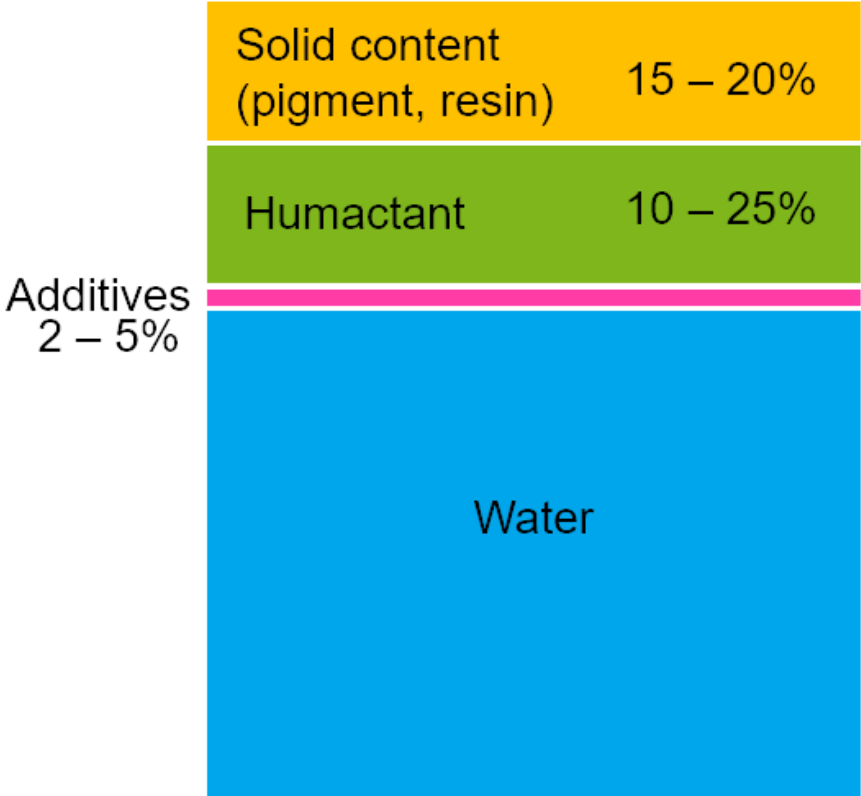
Design follows Function



(Water: 1mPas)

Dancing on a Knife's Edge

Waterbased Inkjet Ink



Viscosity 3 – 11mPas

Requirement

Substrate

Print system

Fast Drying



Excellent Adhesion



Water Fastness



Mechanical resistance



Solutions



Aqueous Inkjet in Film Printing Ink Development

General & Application Specific Properties

Printability

- No Missing Nozzles during:
1h Open-Time
Long-Term Printing
- Image Quality:
High Resolution
No Printing Delay
- Recirculation Stable

Drying

- Ink Immobilization via NIR
- Block Resistant after
Convection Drying

Optical Appearance

- High Optical Density
- Wide Color Gamut
- Light-fast Pigments
- Gloss
- Film Thickness / Haptics

Chemical and Physical Properties

- Scratch Resistance
- Tape Adhesion on Substrate
- Water Rub Resistance
- Ethanol Resistance
- Wet-Winkle Test
- Applicable for Lamination
and More



Aqueous Inkjet in Film Printing

Key properties of ACTEGA's inkjet inks for packaging applications

Regulatory compliance

- Indirect Food Contact
- Swiss Ordinance
- Nestlé Guidance
- FDA

Especially Developed for Challenging Applications on non-absorbent Substrates

- Very Good Adhesion on Typical Label & FP Substrates, e.g. BOPP, PE, PET
- Fast Drying
- High Mechanical (Scratch, Rub etc.) as well as Chemical Resistances (Water, Ethanol etc.)
- Sterilization & Pasteurization Stable, Heat Resistant & ready for Lamination

Integrated System = Primer + Ink + OPV

- One-fits-all Inks & Specific Primers depending on Application and Substrates
- Jettable Primers & OPVs, Highly Transparent Primer
- Primers & OPVs: Matching Pairs of Analog & Digital Products

Fit for Color

- Highly Opaque Jettable White
- Additional OGB+R+V for 95% of Pantone Colors

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