

Recyclability – Introduction

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What topics did we have?

- Revision of INGEDE Method 11
- Updated INGEDE Deinkability Database
- Adhesive applications
 - Increased amount of stickers/coupons of German supermarkets and discounters
 - Exemption from testing of certain adhesives



Revision INGEDE Method 11



- Published in January 2018
- Adoption of pulping conditions **based on fibre concentration** (i. e. ash content)
- Insufficient pulping of printed paper products with **high ash content** is improved compared to fix stock concentration of former versions of the method
- **INGEDE Project 151 16** compared the new procedure with the old one by various deinking tests at CTP Grenoble, PMV Darmstadt, and PTS Munich



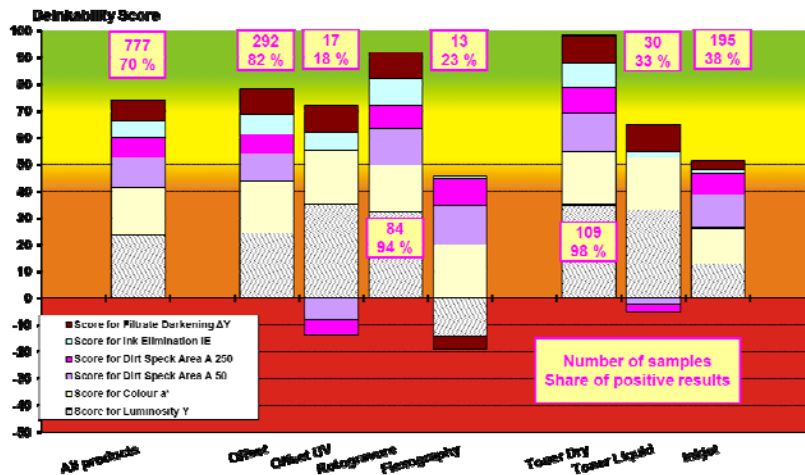
INGEDE Deinkability Database



- Since 2005 **over 770 printed products** have been tested according to INGEDE Method 11
- Continuously **updated** with new samples
- Categories help to identify paper and ink combinations that are **suitable** or **detrimental** to the deinking process



Average Deinkability Results of all Printing Technologies



Summary on Deinkability

- **Most printed products** are sufficiently **deinkable** – standard offset, rotogravure, dry toner
- **Pigment based inkjet** – mostly **low brightness**, sometimes ok (also depending on paper)
- **Dye based inkjet** – mostly **low brightness** and often (green) **colour shade**
- **Liquid toner** – market leader insufficiently deinkable due to **dirt specks**
- **UV cured systems** – mostly problematic due to **dirt specks**

Stickers/Coupons

- Frequent spreading of coupons of super markets and discounters in Germany since autumn 2017



Stickers/Coupons

- Some member mills reported **issues with stickies**, and investigations brought up such A4 sheets of stickers on release paper in the PfR
- Working group shared **mill experience**, initiated discussions, tests, and possible actions
- Different label stocks showed **different recyclability** behaviour tested with Method 12
- Discussions with parties involved are ongoing

EPRC Scorecard for the Removability of Adhesive Applications



- Based on test results and discussions with experts and associations an **exemption list** for testing has been agreed upon, approval by EPRC pending
- The following adhesive applications are categorized as **uncritical** for the recycling loop:
 - Hotmelt adhesives insoluble in water
Minimum film thickness 120 µm and 1.6 mm circle equivalent diameter of application, R&B temperature above 68 °C
 - Reactive hotmelts
Minimum film thickness 60 µm



Today's Presentations



- **Ecolabels: Soft Legislation to Educate Printers and Print Customers** – *Andrea Rimkus, RAL Environment, Bonn*
- **INGEDE Project 153 17: Deinkability Survey** – *Hans-Joachim Putz, PMV, Darmstadt*
- **Coffee Break**
- **History of Inkjet Printing and New, Better Deinkable Inkjet Processes** – *David Croll, Océ Printing Systems, Poing*
- **UV Inks and Varnishes – Opportunities, Markets, Technology, and Deinkability** – *Roland Schröder, hubergroup, and Axel Fischer, INGEDE, Munich*

