UV Offset

Proven printing technology

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Narrow Web

UV Offset basics – Dampening systems

- The dampening system keeps the non image area of the plates coated evenly with water
- When the particles of water and the ink (traditionally oil) hold each other in place, it is called emulsification.
- An ink can however become ‘waterlogged’ or ‘over-emulsified’ as the amount of water increases.
- Once over emulsification is reached, there is no way to recover the ink, other than shutting down the press and fully cleaning the ink system.

UV Offset basics – Fountain solution

- A plate's water receptivity decreases with time as the plate runs on the press.
- The fountain solution is a mixture of chemicals that helps maintain a plate's receptivity to water in the non image area
- The fount has three tasks
  - Lowering surface tension (water γ is 79dynes/cm)
  - Increasing the plate's receptivity to water
  - Maintaining a plate's water receptivity
- Most Narrow Web fountain solutions are 'neutral'.
- Reverse osmosis systems are typically used to purify water and remove minerals, and are easiest to control
- The fountain solution should be monitored during printing by measuring pH and conductivity. (however most fountain solutions are buffered today, which prevents pH change during the run)

UV Offset basics – Emulsion consistency

- A good offset ink will maintain a fine and stable emulsion
- In this case, the fount will cool the ink, which will assist in maintaining a stable viscosity, which in its turn will result in better control of solid density and dot gain
- If a coarse or unstable emulsion is formed, or an over emulsification of the ink occurs, this will effect the printed result
- This is typically seen in excess dot gain, tinting and scumming, piling on the rollers and poor gloss
- It is also important that the rate of emulsification between the inks is similar, to avoid trapping problems
- Should also consider that in the Nilpeter press, the ink carries the fount to the plate – so a stable emulsion is essential for delivering fount to the plate

UV Offset Stable printing process

Correct level of water

Better ink transport

Lower ink feeding

Correct density

Optimal printing contrast

FB0625

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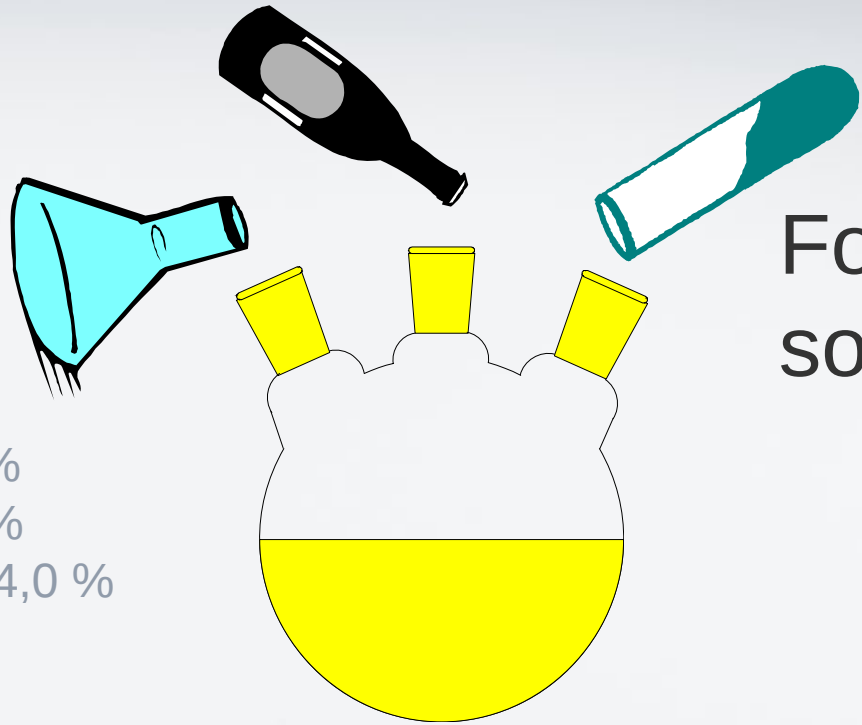
UV Offset
Dampening water



Content:

Water (de-ionosed)	91,5 %
IPA (max.)	0-10 %
Fount conc.	2,0 – 4,0 %
Fount additive	3,0 %
Anti corrosion (max.)	0,5 %

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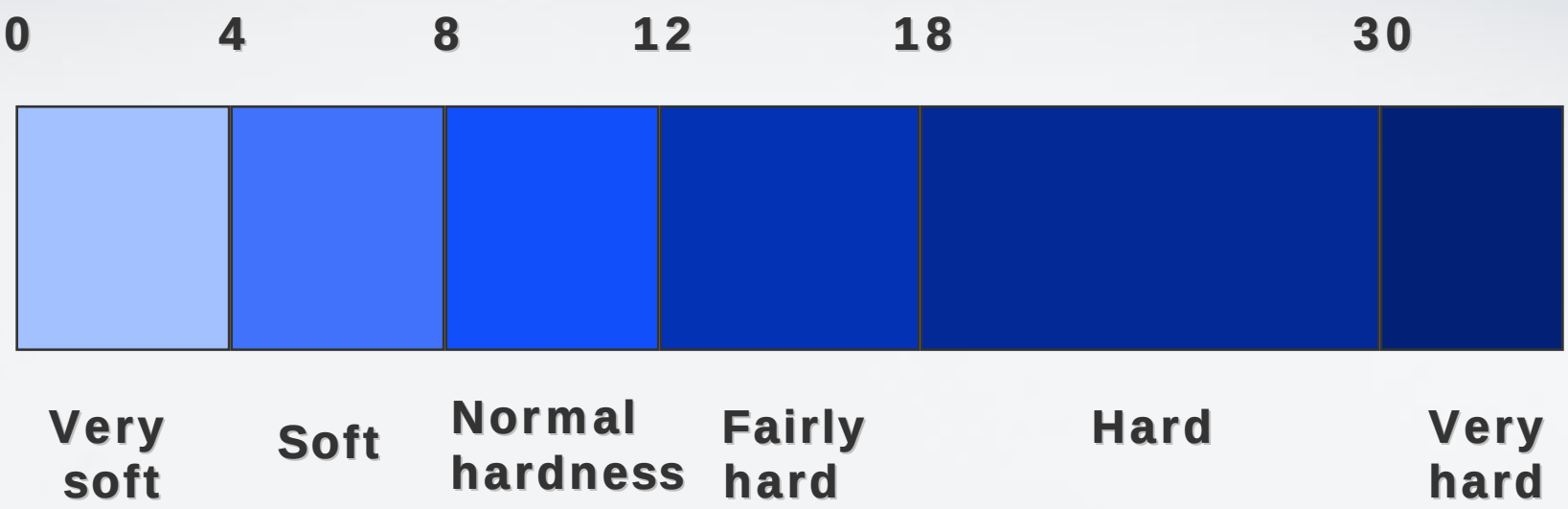
Water hardness

German degree of Hardness °dH



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Flint Group Narrow Web fountain

- We have very good experience and thorough field testing with 2 products
- We know that correctly handled they'll give trouble free offset printing together with Lithocure Premium.

Water type	Aniart code	Description
For hard water 0-10 dH	AAN00101	Hydrofast ARH 317
For soft water >10 dH	AAN00102	Hydrofast ARS 318

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range

- Lithocure Premium
  - UV offset ink tailor-made for Narrow web presses
  - Excellent lithographic properties, very stable & large operating window
  - Superb printability and press performance
  - Excellent colour strength
  - Universal function for wide range of substrates, from matt paper to Synthetic films

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UV Offset inks

Application	Lithocure Premium
PS Paper label	• • •
PS Film Labels	• • •
Wrap around film label	• •
In mold Label	• •
Sleeves	•
Folding Carton	• • •
Sachets & Pouches	• •
Flexible Packaging	•

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