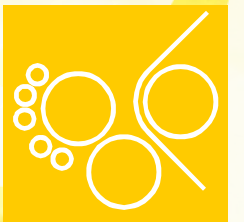


UV Offset

Proven printing technology



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

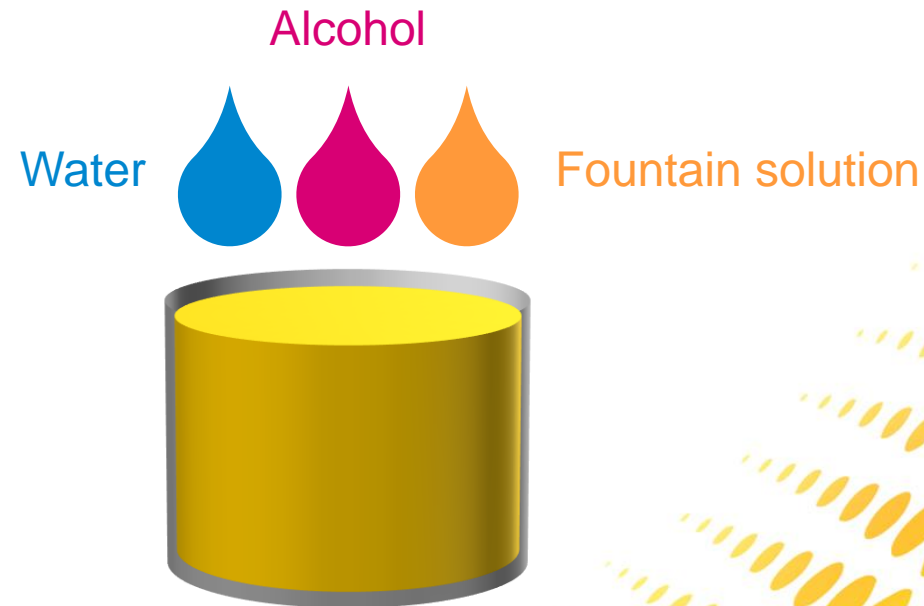
UV Offset Stable printing process



UV Offset – Dampening water

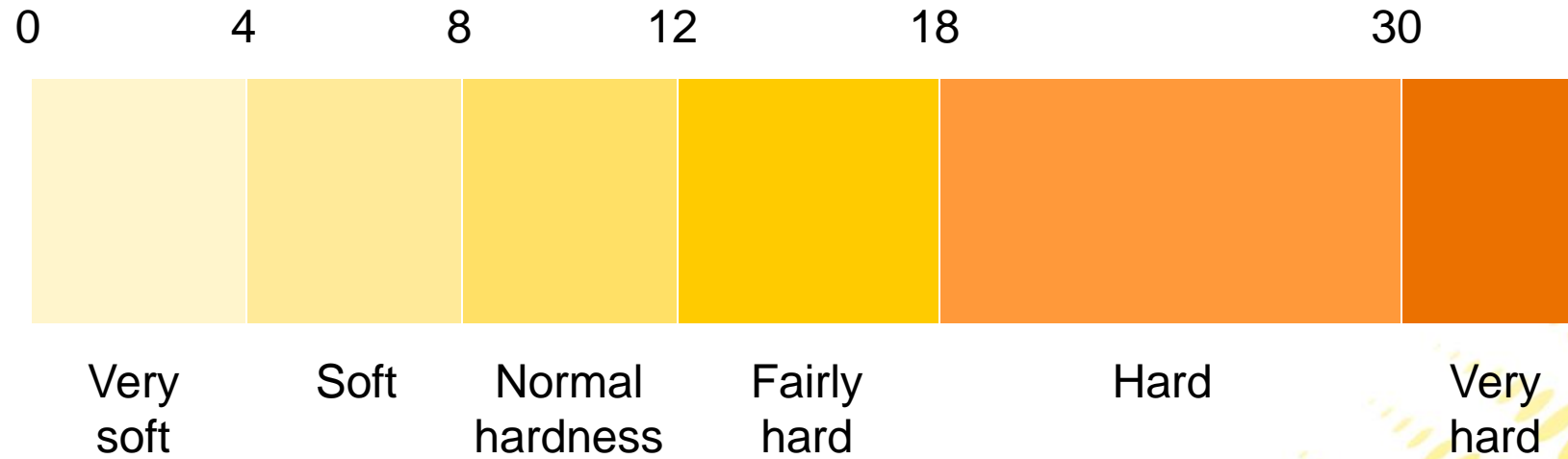
Content:

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



UV Offset – water hardness

German degree of Hardness °dH



UV Offset

Flint Group Narrow Web fountain solution

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

Water type	Description
For hard water 0-10 dH	Hydrofast ARH 317
For soft water >10 dH	Hydrofast ARS 318
For Low migration print	Hydrofast AFS359 Novasens

UV Offset – 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



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	●