GRIDTUNE

Innovative surface patterning technology for flexo printing plates

GridTune applies micro patterns to optimize the print quality of flexographic plates. In large solid areas, it introduces a precise pattern of small holes, creating controlled surface roughness on flat tints and dark tones. This micro-textured surface significantly improves ink transfer and prevents common print defects.

GridTune is part of ECO3's fully integrated flexo prepress solution that comes complete with CtP, film, plates, screening technologies, workflow software and comprehensive service and support.

YOU PRINT. WE CARE.

GridTune is a software application designed to apply micro-patterns to 1-bit files used to create flexographic printing plates. It is an integral part of the ECO3 Amfortis workflow for packaging printing. GridTune can also be used in PlateAssembler, the software for combining multiple jobs or separations on a single flexo plate. Customizable patterns can be used, which can differ per separation.

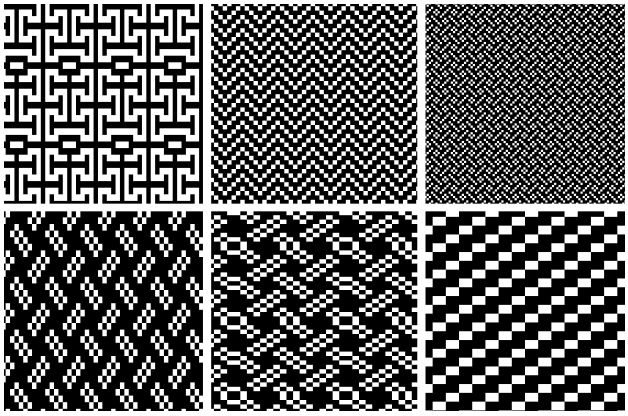
GridTune technology is particularly effective in larger solid areas, where the hole pattern creates a rougher surface on flat tints and dark tones. This micro-textured surface significantly improves ink transfer and stabilizes print quality.

By creating controlled surface roughness in solid areas, GridTune ensures a more even and consistent ink laydown, especially improving white ink laydown. Ink densities can be increased, allowing the use of less voluminous anilox rolls. Even with higher densities, solids remain smooth.

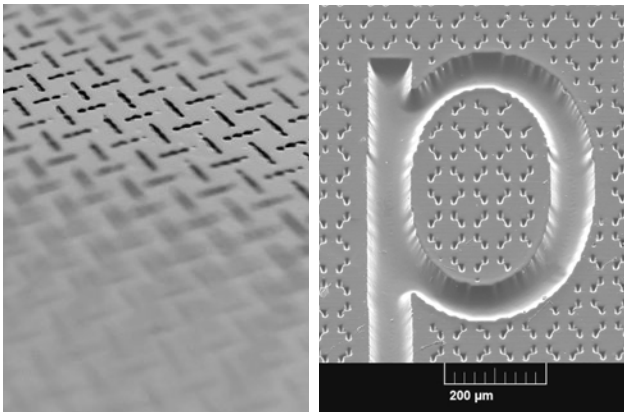
Mottling is a defect in which ink appears uneven or blotchy across large solid areas. It often occurs when ink cannot spread uniformly on smooth plate surfaces. The micro-pattern introduced by GridTune promotes a controlled flow of ink, eliminating irregularities and delivering clean, uniform solids.

Trailing edge void occurs when the trailing edge of an image prints lighter because a vacuum forms between the plate and the substrate during ink transfer. GridTune's escape cavities break this vacuum, allowing ink to transfer smoothly until the end of the image. As a result, the trailing edge prints cleanly without fading or missing ink.

By addressing both mottling and trailing edge void, GridTune ensures stable, consistent ink transfer across all solid areas. Better ink transfer results in faster color setup and fewer cleaning stops, improving efficiency and productivity while reducing waste and downtime.



GridTune bitmap patterns



GridTune patterning on flexo plates

BENEFITS OF GRIDTUNE PATTERNING

Benefits for brand owners

- Consistent print results
- Better contrast
- Improved tonal range with brighter colors
- Crispier text and superb negative fine line reproduction

Benefits for reproshops, converters and printers

- Optimized ink delivery for solids and shadows
- Increased ink densities allow for less voluminous anilox rolls
- More efficient ink transfer helps reduce the amount of ink needed
- Delivering high opacity with white ink at lower ink volumes
- Stable dot gain behavior
- Reduces trailing edge voids and halo's
- Fewer cleaning stops result in increased productivity and less waste

ECO3.com

ECO3 is committed to continuous innovation that targets ecology, economy and extra convenience. Our solutions are designed to deliver higher productivity, lower costs and greener outcomes.

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