

Client Reference: SWP

We are working with an international group of manufacturing companies that seek to improve the ability of their **paper-containing products to resist water i.e. to increase their hydrophobic capabilities**. The client utilises paper and board in various formats and is initially looking to increase product resistance to the detrimental effects of being ‘splashed’ with water rather than to resist complete immersion. This is particularly pertinent to its thinner paper-based products, where excess moisture might affect the structural integrity or performance of packaging, etc.

With an increase in the use of biodegradable materials in single-use / disposable products and food packaging (including those used for cooking), there is a need for an effective treatment to provide temporary barrier properties which don’t affect the recyclability or ease of use of paper. The client is keen to find an effective treatment to render cellulose-based materials splash-proof, and is open to consider various technologies, including (but not limited to):-

- Surface modification - to stop the water physically impinging upon the surface or reducing/eliminating contact or dwell time on the paper product to a minimum
- Mechanical treatments modify surface tension (e.g. laser) or contact angle of paper
- Coatings - natural polymers, waxes, silicone, bitumen, rubber
- Modification of paper structure - e.g. fibres, impregnation
- Self-cleaning surfaces
- Nanotechnology

Potential solutions should:

- Not affect the handling properties of paper, i.e. its ability to be processed - printing, cutting, folding, etc or the basic properties when exposed to heat or other processing steps
- Be safe for human contact, and ideally food safe

Potential solutions could be found from various industries, including: -

- Printing and packaging industries
- Hygiene industries
- Hazardous or protective garment treatments
- Nature / animal kingdom

Our client is currently in the exploration / proof of concept stage and therefore all innovative approaches are particularly welcome. It is the intention to prototype various implementations and therefore a willingness to work with the client to develop a solution is important.

Suppliers are invited to provide introductory product information for review. Companies that are currently developing technology or end-product that could be suitable for this requirement are welcome to share what non-confidential they can, for review by the client. Please send preliminary information on any proposed opportunity to – Diane Kolonko at diane@strategicallies.co.uk