

A bag of tricks

The packaging of cement needs to meet several conditions. Not only are cement bags required to stand up against the everyday rigours of handling, they also need to protect the contents from deteriorating factors such as moisture ingress and leave as small an environmental footprint as possible when no longer required.

■ by ICR Research, UK

Continuous R&D efforts by paper sack manufacturers and their suppliers have resulted in steady improvements in paper sack technology, highlights Eurosac, the European federation of multiwall paper sack manufacturers.

These innovations are accompanied by developments in the paper sack's main material, sack kraft paper, which is produced from 100 per cent virgin fibres and sourced from sustainably-managed forests. Eurosac notes: "In the last two decades, porosity has increased by nearly 30 per cent while strength has risen by 45 per cent, delivering a 25 per cent reduction in paper consumption per sack, which benefits the environment. This porosity-strength combination permits high-speed filling and provides significant cost savings and operational efficiency. Up to 6000 paper bags/h can be filled compared to 2000 polyethylene (PE) form fill seal (FFS) sacks."

Eurosac member innovations

Highlighting the efforts of its members in producing sacks that are easy to handle, offer moisture protection as well as low

BillerudKorsnäs' D-Sack® breaks up in the cement mixer as shown by Jonas Almkvist (left), business development manager and project manager responsible, and Ove Lindström, senior application specialist, Sack Solutions



The SAFEdy showerproof bag from dy-pack: nano-perforated paper combines with a PE-coated outer layer and special glue, designed to protect against wet ambient conditions



damage rates, Eurosac outlines three examples of the latest innovations from BillerudKorsnäs, dy-pack and Mondi.

Dissolvable sack by BillerudKorsnäs

The D-Sack® for cement from BillerudKorsnäs can be put entirely into the cement mixer where it breaks up and integrates its components with the concrete or mortar without negatively affecting their quality. "Customers benefit from the elimination of waste as well as improved cement utilisation and a better health and safety environment for workers," notes Eurosac.

Showerproof protection from dy-pack

The SAFEdy showerproof bag from dy-pack provides reliable protection against moisture, air and gas penetration – even if stored in wet conditions.

The solution combines nano-perforated paper (enabling the de-aeration) with a PE-coated outer layer and an intelligent glue concept.

Eurosac states: "Containing only 10 per cent plastic, the sack is an environmentally-friendly alternative to PE sacks."

Ensuring moisture protection with Mondi's HYBRIDPRO

The water-resistant paper-based sack HYBRIDPRO by Mondi has turned the traditional sack construction inside out so that a high-density PE layer acts as a protective outer ply.

"The sack provides long-lasting protection from rain, a prolonged shelf life and can be printed in up to eight colours," highlights Eurosac.

The two moisture-proof sacks run on existing paper sack filling machines with only little or no reduction in speed, it adds.

Mondi's HYBRIDPRO is designed to ensure moisture protection and extend shelf life

