Breaking new boundaries with barrier pack technology

As a force in the aerosol market with a broad catalogue of proven barrier pack products, Lindal has established itself as a key influencer in barrier packaging systems. It says the technology, which has been in existence for over 20 years, presents strong and diverse advantages

Bag on valve

Aerosol barrier pack technology is nothing new. It has been around since the 1990s with bag on valve (BoV) at the forefront of the development. Characterised by the separation of the propellant from the product, its protection from oxidants and the mixing of a product with foaming gas, pressurised barrier packs have already claimed their rightful position in cosmetic, medical, food and technical markets, yet they are still considered a relatively new technology for many applications.

Without the need for hydrocarbon propellants, the use of compressed gasses instead of liquefied gas in the BoV system helps to eliminate, or greatly reduce, volatile organic compounds and together with a 99% product evacuation rate, BoV has more than demonstrated its environmental credentials too.

Unal Varol, global BoV business manager for Lindal says, "The sustainability benefits of BoV and the surge in use of post-foaming products like shaving gel has resulted in an understandable popularity increase for BoV over recent years. Not only that, it is easy to use, performs better, preserves the contents well and you do not have to alter the formulation to accommodate the propellant."

Bag and bag is the future

Barrier technology does not stop at BoV. According to Lindal, one of the key developments in this area has been the progression of bag and bag (BaB) technology. It has the same flexibility and high product evacuation rate as BoV but instead of one, two BoVs are stored in a single can, each containing separate products, separately dispensed and not stored together – this is ideal for liquids, creams and gels that cannot be combined until the time of use. Maintaining the convenience of a single can, the shelf life is increased for products that start to change chemically once they are mixed, by keeping them separate until they are dispensed. It's also possible with BaB to mix the product within the actuator and release it as a mixed spray or dispense it independently and mix it outside the system.

Bag on collar (BoC) shares many of the qualities of its barrier pack counterparts, but is specifically designed for viscous products that cannot be dispensed through a standard valve. Instead, it uses a high-delivery valve that is fitted after filling. The BoC system has a faster filling speed than BoV with an excellent product evacuation rate of between 96 and 98%. Again, like BoV and BaB, the product and propellant are separated and can be used without the need for hydrocarbons. These advantages are making BoC attractive to new markets ranging from medical, food and industrial sectors.

Bag and bag

Marketing benefits

As well as new markets, barrier technology offers an array of other marketing opportunities, thanks to the high excavation rate of the product resulting in less product waste, the reduction in noise when spraying and the finer mist produced.

Kashif Choudhry, group marketing manager at Lindal, said, "The broad reach of our barrier pack products allows for almost limitless marketing opportunities. Industries that can benefit from BoV technology include cosmetics, for shaving and shower gels, pharmaceuticals for nasal saline and diclofenac pain relief gel. Olive oil and syrups for the food sector also benefit, as well as technical products like nail guns and wheel rim cleaner. If the purity of a product

High delivery valve

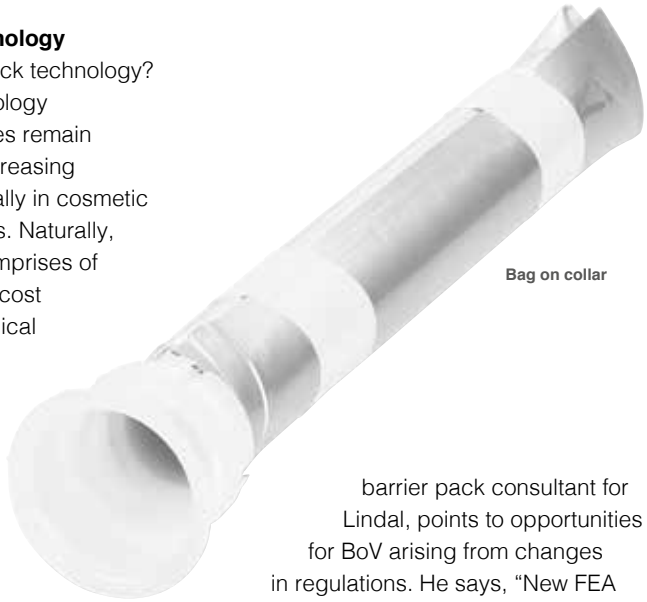
is essential or if it is necessary to quietly dispense it, then BoV is a very possible solution."

Choudhry goes on to mention that the company's award-winning Enhanced Mist Technology (EMT) is suitable for BoV and is designed for low viscosity products like facial skin care mist, using compressed gas. He says, "EMT provides a more uniform spray over the life of the pack and although it can be used with traditional valves, in combination with BoV, it draws on the benefits of barrier technology too."

Next steps for barrier technology

So, what's next for barrier pack technology? Lindal states that BoV technology manufacturing and filling rates remain at a steady pace with the increasing production capacity, especially in cosmetic and over the counter markets. Naturally, because the BoV system comprises of an additional part, there is a cost implication. In terms of technical and regulation requirements, the usage of can size is related to European Aerosol Federation (FEA) standards, and the bag volume of the system needs to fit in the can to be fully functional. Furthermore, the storage volume in the system should be visible on the can in Europe and the dispensed volume in the US. Lindal points out that tariffs have been put in place in the US which have caused challenges due to increasing film prices, but this is something Lindal is working closely with its suppliers to eliminate.

Despite the challenges, Georges Bouille, barrier pack consultant for Lindal, points to opportunities for BoV arising from changes in regulations. He says, "New FEA guidelines point to a higher pressure allowance for compressed air applications. This increase will help stimulate the dip tube with compressed air market which will trigger a boost for BoV also."



Bag on collar

For more information:
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