

Dupont makes big news with over-moulding technology

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New over-moulding technology from DuPont unlocks design potential for cosmetic packaging

DuPont Cosmetic Solutions presented a true innovative moulding technology at the [Luxe Pack](#) tradeshow that just closed its doors in Monaco. Based on the over-moulding of polymer inserts, the new technology broadens the design freedom of thick-walled cosmetic and fragrance containers. It also enables the production of contrasting geometries for the internal and external walls, decoration techniques such as the encasing of label and inserts, the simple colouring of the polymer insert using masterbatch, or the application of frosted and glossy effects on the exterior surface directly from the tool.

This patented technology has been developed by the DuPont affiliate in Japan, DuPont Mitsui Polychemicals (MDP). It involves the encasing, or over-moulding, of a hollow polymer insert with a thick, yet lightweight, exterior wall of durable Surlyn® PC 2000. It can be used for the scrap-free production of thick-walled bottles and containers with wall thicknesses of 10 millimetres and more. Due to the accuracy of the injection moulding process involved, used on standard machinery and with little extra investment required by the moulder, there is high control of neck diameter and wall thickness.



"We are currently working with PET or PP, explains Prosper Zufferey, processing expert at DuPont Cosmetic Solutions, as the material for the polymer insert, as they provide sufficient resistance to the chemicals found in cosmetic lotions. For more chemically-aggressive fragrances we are working on the development of multilayer polymer inserts produced by extrusion blow moulding."

Benefits of the polymer inserts include its ease of use in standard moulding tools, the material's ability to absorb the high injection pressures of the over-moulding process without the risk of breakage and its consistent adhesion to the over-moulded Surlyn®.