

3M Expands Inhalation Portfolio with New Solutions for pMDIs

Plasma Coating Technology and Face Seal Valve offer advanced drug delivery features

3M Drug Delivery Systems introduces two new innovations for inhalation drug delivery with pressurized metered dose inhalers (pMDIs)—3M™ Plasma Coating Technology and the 3M™ Face Seal Valve. Both technologies help pMDI systems achieve significant improvement to product performance, expanding the capabilities and the robustness of these devices.

3M's Plasma Coating Technology, one of the 40+ core technologies actively utilized throughout the company, now helps ensure technical success with inhalation components for challenging hydrofluoroalkane (HFA) formulations by creating a layer that protects against degradation, deposition and corrosion. The ultra thin coating is suitable for both plastics and metals, and addresses several existing challenges with pMDI hardware. Some active pharmaceutical ingredients (APIs) are susceptible to degradation when in contact with metal oxides, but 3M's new technology effectively addresses this problem, showing a significant reduction in degradation during laboratory testing. An additional known concern with pMDIs is the deposition of API on the surfaces of container closure systems (CCS). 3M Plasma Coating Technology meets this challenge as well, keeping surfaces essentially free from deposition. Finally, while certain pMDI formulations are susceptible to corrosion of the CCS due to the combination of metal components in the valve and canister, 3M's Plasma Layer Coating provides an effective barrier to corrosive solutions. In summary, the 3M Plasma Coating Technology has been demonstrated to provide multiple benefits in pMDI systems enabling optimal performance.

The technology is being showcased in a poster session at the Respiratory Drug Delivery Conference (RDD).

An additional innovation in inhalation component offerings, the 3M Face Seal Valve eliminates the need to prime an inhaler by collecting the dose as the inhaler is fired. Traditional pMDI valves operate on a "dose retention" principle, collecting the dose when the valve stem is released after firing. Over time, this can lead to loss of prime or loss of dose, which is why patients are advised to prime these inhalers by firing an uninhaled shot before use. The 3M Face Seal Valve eliminates the need for this extra step, simplifying the process for patients and making compliance easier. The technology helps ensure patients receive a full dose of medication with every use, including single shot products, resulting in more satisfied patients and prescribers.

"As an industry leader, 3M remains committed to investing in research and development in order to keep bringing breakthroughs like these to market," said Jim Vaughan, division vice president, 3M Drug Delivery Systems. "Companies expect innovation from 3M and these latest advancements demonstrate our continued commitment to MDI solutions, even as we expand our footprint into additional drug delivery technologies."

Both 3M Plasma Coating Technology and the 3M Face Seal Valve are available as parts of a complete system program, or as stand alone components. For more information or to obtain a copy of the 3M™ Plasma Coating Technology poster, please contact 3M Drug Delivery Systems at www.3M.com/dds or call 1-800-643-8086.

About 3M Drug Delivery Systems

3M Drug Delivery Systems partners with pharmaceutical and biotech companies to develop pharmaceuticals using 3M's inhalation or transdermal drug delivery technology. 3M offers a full range of feasibility, development and manufacturing capabilities combined with regulatory guidance to help bring products to market. In-house resources, including toxicology, regulatory expertise, quality assurance, operations, and marketed product

support, are available for each step of the development and commercialization process. This depth of resources is one reason why more than 50 percent of all metered-dose inhalers worldwide and 80 percent of all transdermal systems in the United States utilize 3M drug delivery technology. For more information, please visit www.3M.com/dds or call 1-800-643-8086.

About 3M Health Care

3M Health Care, one of 3M's six major business segments, provides world-class innovative products and services to help health care professionals improve the practice, delivery and outcome of patient care in medical, oral care, drug delivery and health information markets.

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