

## Consumer Applications

### Air Freshener

A successful wick design for a scented air-care product shows how Porex brings fresh ideas to manufacturing processes that ultimately add value and increase opportunities for businesses. Incorporating Porex's extensive wicking expertise in other industries, the air-care wick delivers an extremely efficient rate of release while also meeting safety standards.



### Design Challenge

Consumer demand for scented air-care products with a controlled rate of release requires greater emphasis on efficient and economical packaging and manufacturing processes. Porex was asked to meet this challenge by designing and developing a wick for use in a consumer-branded scented oil air care product. The design was required to: (1) wick scented oil at a rate in excess of evaporation, (2) ensure adequate capillary head, (3) serve as an aerosol release pad for the wicked scented oil, (4) release fragrance at a controlled and linear rate, (5) create a fluid seal within the bottle to eliminate or minimize leakage if it were turned upside down, and (6) comply with child safety regulations. In addition, the wick needed to be pliable enough to seal against the inner wall of the bottle's neck, yet rigid enough to support a high-speed insert production process.

### Solution

Porex was already manufacturing millions of marker nibs each week for highlighters and coloring markers. Our engineers were easily able to apply this extensive wicking experience to the development of the air-care wick. Surface energies, pore size, pore volume and material types were among the critical factors considered in the design. The final product featured a unique type of polyethylene offering a combination of small pore size and high void volume, including an innovative molded geometry for a tamper-proof design complying with child safety regulations.

### Results

The success of this wicking design project illustrates how Porex applies application expertise from one market segment to another, delivering innovations that offer manufacturers valuable business opportunities.

*By combining ideas, know-how and proven results with the highest standard of innovation and excellence, POREX Porous Media provides unique solutions for various applications.*



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