

Ultra-thin perforated materials for advanced applications

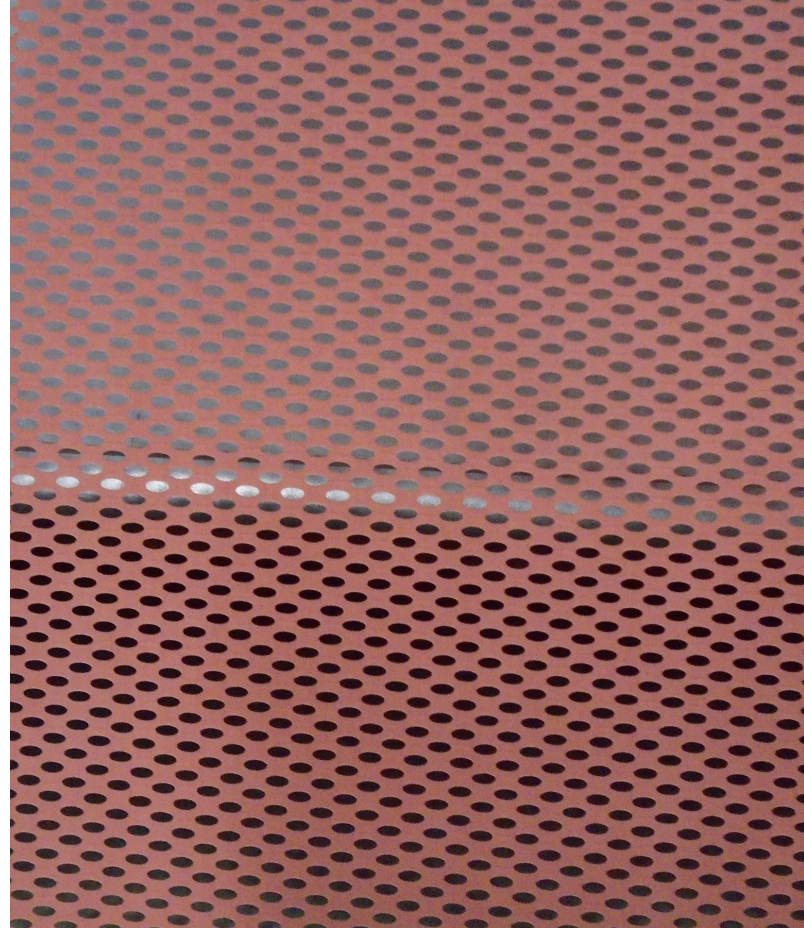
Perforated materials

Building on our expertise and leadership in precision thin-gauge expanded open-area products, PPG's engineered materials business introduces ultra-thin perforated foils and polymers to complement its product offerings for specialized, highly-engineered applications in a broad scope of industries.

After 70 years of developing and perfecting precision expanding machines to produce thin-gauge materials, PPG's engineered materials business has broadened its focus to develop new perforating technology to produce even thinner open-area products beyond the limits of expanding and traditional perforating machines.

Perforating is not new. It's been around for over a century, but mechanically perforating thin-gauge materials under 100 microns until now was next to impossible. Our ultra-thin perforated materials are highly versatile, open-area products offering strength and functionality for applications where weight, conductivity and controlled openings are crucial for performance.

Perforated products from PPG are designed to meet critical specifications in industries such as aerospace, energy, electronics, automotive, and filtration. Our technical expertise draws from over 70 years of industry knowledge to help you design and produce quality perforated products that meet your precise specification.



Features

- Thinner: specializing in sub-200 μm (.008") foils & polymers
- Wider: up to 1.6 meters (63")
- Lower open areas: from 1 to 25%
- Strength: increased tensile strength
- Products with solid borders or interrupts
- Multiple hole shapes and patterns for optimizing electrical, mechanical or filtering properties

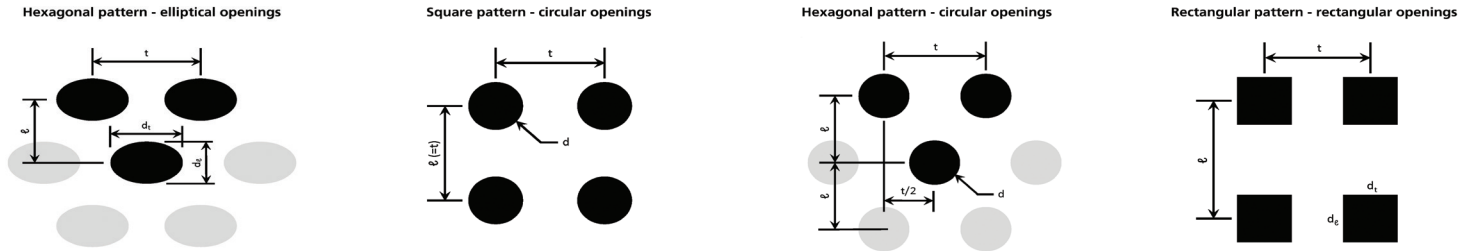
Applications

- Lighter weight lightning strike protection foils (LSP) EMI/RFI Shielding
- Current collectors/electrodes for advanced battery & ultra-capacitors chemistry
- Precision tailored filter and support media



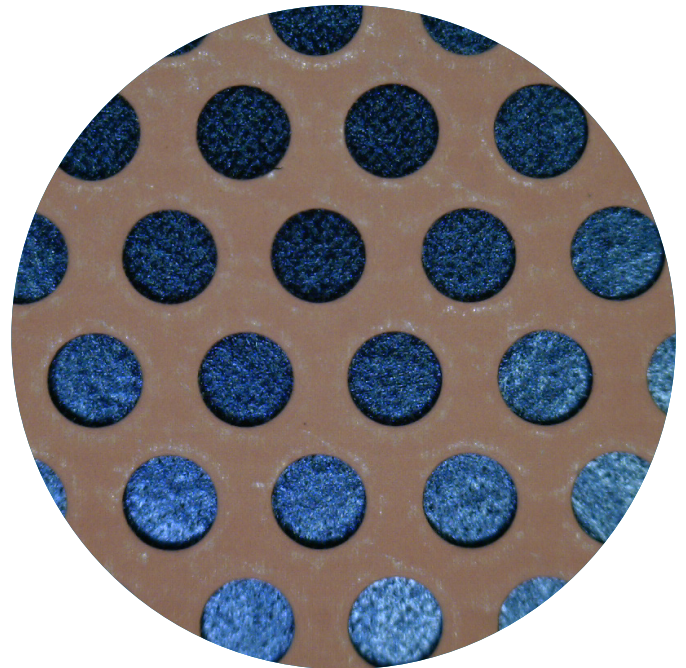
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Perforated technology extends PPG's product range of precision open-area foils for next-generation aerospace, electronic, and power applications.



Materials	Thickness	Hole shapes	Width
Copper, aluminum, alloys	Specializing in sub-200 μ m (.008")	Circle (round), square, ellipse, rectangular, hexagonal	Up to 1.6 meters, 63 inches wide

Perforated copper material shown in image	
Thickness:	25 μ m (.001")
Hole shape:	Ellipse (~2x1 mm)
Open area:	32%
Openings per m ² :	227,000
Maximum width:	1m



Our open-area materials have been specifically developed to work in highly-engineered applications. PPG's engineering business is a corporate sponsor of the Society for the Advancement of Material and Process Engineering, and is AS9100:D and ISO 9001:2015 certified. Our expertise is why top OEMs work with PPG. Our continuous investment into our proprietary technology allows us to develop machines that produce thin, uniquely versatile, open area materials that weren't previously possible.

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This document has been reviewed by the PPG's Aerospace Export Control Department and has been determined to contain only EAR99 controlled data.

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